DEADY HALL ASSESSMENT

UNIVERSITY OF OREGON

03 November 2017

Hennebery Eddy
Architects

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University of Oregon
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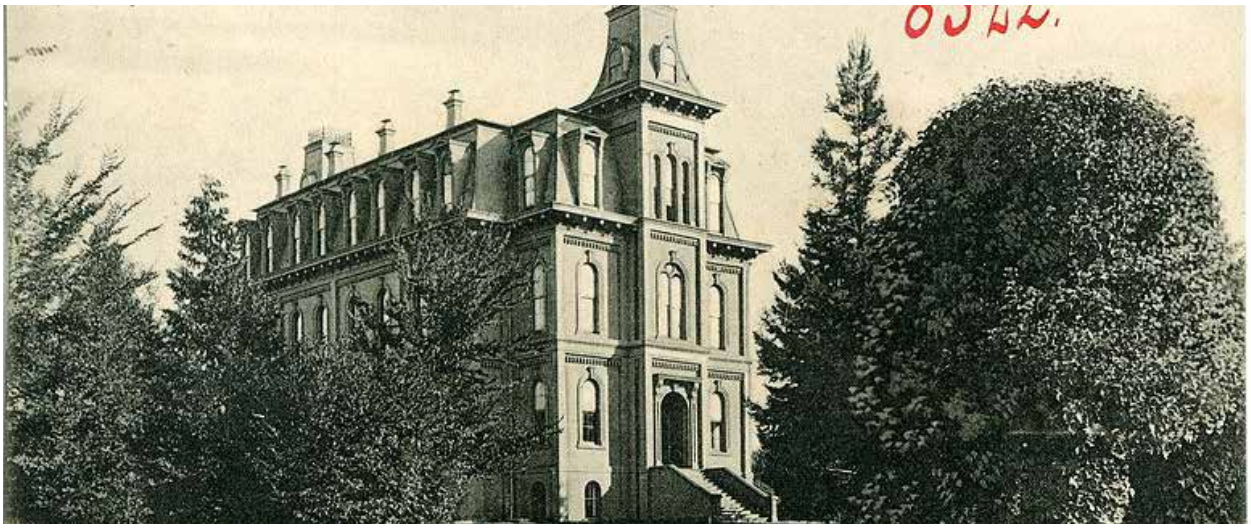


INTRODUCTION & PROJECT OBJECTIVES

The University of Oregon campus in Eugene, Oregon was physically established in 1876 with the completion of it's first building - Deady Hall. Over the past 140 years, the University has grown up around Deady Hall, but it retains its iconic presence on the campus and is functionally vital as much needed classroom and office space. The building has been renovated multiple times, including the 1914 addition of two mezzanine floors between the existing floors and the 1952 alteration of those mezzanines and complete interior remodel. Deady Hall is a National Historic Landmark structure (one of 8 in Oregon) and is listed on the National Register of Historic Places under Criteria A and C. Deady Hall is considered a "primary" ranked historic building per the University's Campus Heritage Landscape Plan - 4.0 Survey of Buildings - possessing high historic significance and good integrity.

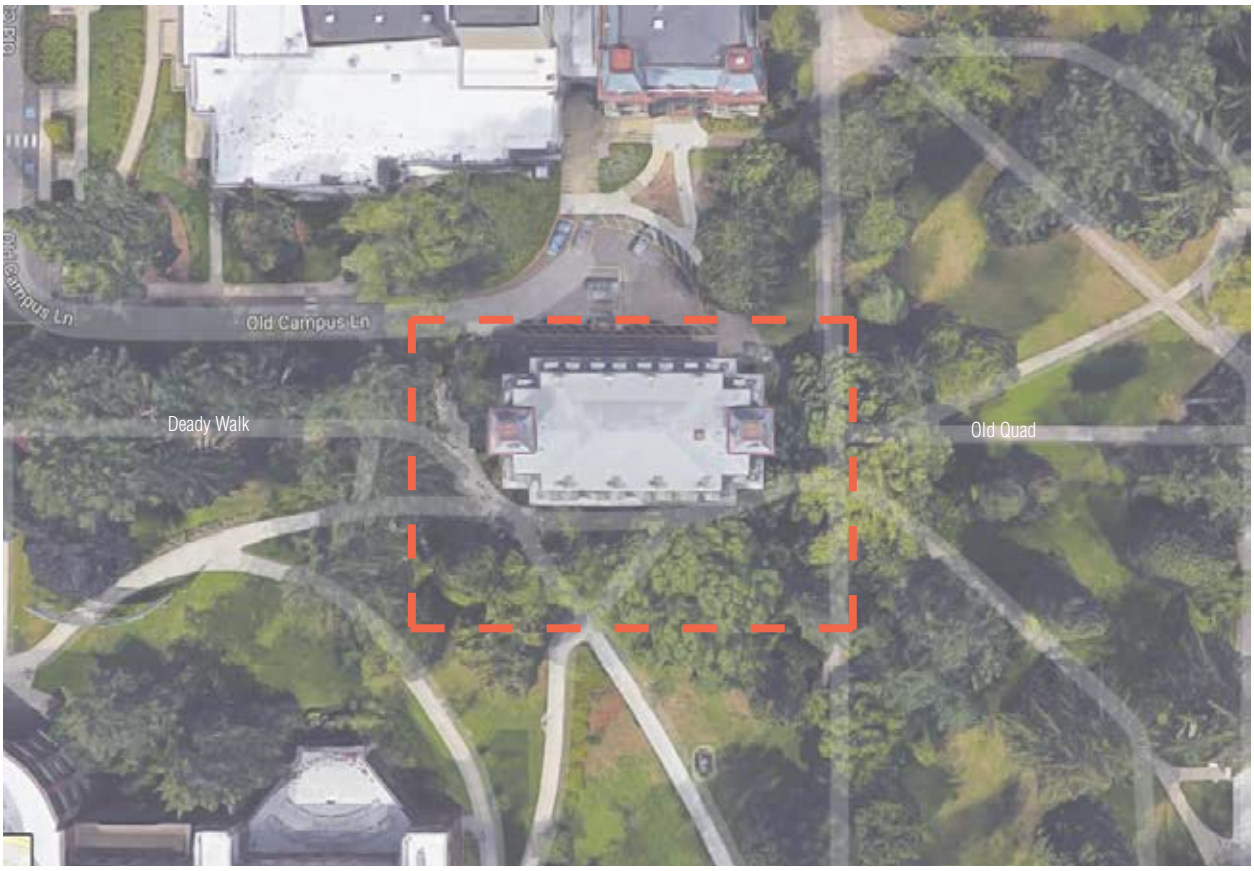
The University of Oregon Campus Planning and Facilities Management (CPFM) - Design and Construction has requested Hennebery Eddy Architects to assess the current conditions and deferred maintenance of Deady Hall - including the building exterior, structure, systems, interior finishes, layout and program, and immediately adjacent surrounding site. The primary goal of the assessment is to identify the needs of the building related to maintenance, seismic performance, efficiency, and fire and life safety on balance with preservation standards. Additional goals include addressing functionality, programming, non-compatible finishes, and spatial quality and character.

The scope of the assessment includes:

- Review of existing documentation
- Review of the UO Campus Plan and other applicable guidance documents
- Visual survey condition assessment of the building exterior forms, features, materials and details with recommendations for repair and restoration
- Analysis of the interior floor plan, program, and finishes with options for reorganizing the floor plan
- Assessment of compliance with building code, ADA Standards, elevator and other life/safety regulations with recommendations
- Evaluation of building structure for seismic performance and compliance with current structural code with seismic upgrade options
- Evaluation of existing MEP systems and recommendations for new systems
- Assessment of existing utilities and recommendations for upgrades

This report will provide the basis for CPFM to develop a comprehensive scope of work and associated project budget for a deferred maintenance rehabilitation project.

A cost estimate for direct construction costs associated with recommendations will be provided by the third-party Construction Manager, Fortis Construction. The cost estimate will be presented as both a single construction project and a phased project and plan for five to ten years of escalation.



Project Boundary *(shown dashed) - for the purposes of this assessment the project boundary was limited to the area shown by the UO and HEA team during the initial project meeting.*

HIGH LEVEL COST SUMMARY

University of Oregon - Building Assessment Executive Summary - Direct Construction Budget Summary

Fall 2017

Building Name: UO Deady Hall — Estimating Firm: Fortis Construction

Building GSF 27921

Yellow Cells are Self-Calculating

CSI SECTION	BUDGET CATEGORY	From Cost Model	BUDGET RANGE (Assume Summer 2021 Mid Construction) Low	BUDGET RANGE (Assume Summer 2021 Mid Construction) High	Cost Per SF Low	Cost Per SF High
DIV 01	General Requirements	$ 154,160	$ 138,744	$ 177,284	$ 5	$ 6
DIV 02	Existing Conditions (Demolition)	$ 504,108	$ 453,697	$ 579,724	$ 16	$ 21
DIV 03	Concrete	$ 441,249	$ 397,124	$ 507,437	$ 14	$ 18
DIV 04	Masonry	$ 789,551	$ 710,596	$ 907,984	$ 25	$ 33
DIV 05	Metals	$ 715,186	$ 643,667	$ 822,464	$ 23	$ 29
DIV 06	Wood, Plastic, and Composites	$ 730,884	$ 657,795	$ 840,516	$ 24	$ 30
DIV 07	Thermal and Moisture Protection	$ 73,123	$ 65,811	$ 84,091	$ 2	$ 3
DIV 08	Doors and Windows	$ 786,442	$ 707,797	$ 904,408	$ 25	$ 32
DIV 09	Finishes	$ 1,178,771	$ 1,060,894	$ 1,355,587	$ 38	$ 49
DIV 10	Specialties	$ 163,091	$ 146,782	$ 187,555	$ 5	$ 7
DIV 11	Equipment	$ 4,041	$ 3,637	$ 4,647	$ 0	$ 0
DIV 12	Furnishings	$ 53,074	$ 47,767	$ 61,035	$ 2	$ 2
DIV 13	Special Construction	$ 29,281	$ 26,353	$ 33,673	$ 1	$ 1
DIV 14	Conveying Equipment	$ 374,792	$ 337,312	$ 431,010	$ 12	$ 15
DIV 21	Fire Suppression	$ 135,712	$ 122,141	$ 156,069	$ 4	$ 6
DIV 22	Plumbing	$ 300,856	$ 270,770	$ 345,984	$ 10	$ 12
DIV 23	HVAC Systems	$ 1,591,043	$ 1,431,939	$ 1,829,699	$ 51	$ 66
DIV 25	Integrated Automation	$ 310,666	$ 279,600	$ 357,266	$ 10	$ 13
DIV 26	Electrical	$ 1,160,912	$ 1,044,820	$ 1,335,048	$ 37	$ 48
DIV 27	Communications / IT	$ 245,263	$ 220,737	$ 282,052	$ 8	$ 10
DIV 28	Electronic Safety / Security	$ 179,860	$ 161,874	$ 206,838	$ 6	$ 7
DIV 31-33	Site Work (Excavation, Landscaping, Flatwork)	$ 549,573	$ 494,616	$ 632,009	$ 18	$ 23
Subtotal:	Direct Costs	$ 10,471,637	$ 9,424,473	$ 12,042,382	$ 338	$ 431
	Construction Contingency	$ 308,320	$ 277,488	$ 354,568	$ 10	$ 13
	General Conditions incl. Precon	$ 934,414	$ 840,973	$ 1,074,576	$ 30	$ 38
	Contractor Fee (3.5%) incl. GL	$ 364,332	$ 327,899	$ 418,982	$ 12	$ 15
	Builders Risk (.8%)	$ 78,754	$ 70,878	$ 90,567	$ 3	$ 3
	Performance Bond (.9%)	$ 90,100	$ 81,090	$ 103,614	$ 3	$ 4
	Subcontractor Default Insurance (1%)	$ 88,091	$ 79,282	$ 101,305	$ 3	$ 4
Total Direct Construction:		$ 12,335,648	$ 11,102,083	$ 14,185,995	$ 398	$ 508

SUMMARY OF FINDINGS + RECOMMENDATIONS

The following existing condition findings are based on the field survey conducted by Hennebery Eddy Architects and our consultant team in conjunction with the project kick-off meeting September 6, 2017. The project team had access to the exterior from the ground, all interior spaces, and the towers to perform a visual assessment of the current physical conditions including materials, systems, code compliance, accessibility. Observations were limited to above ground features, surfaces visible from the ground or the tower, and a sampling of windows at each floor from the interior. No destructive investigation or laboratory material analysis was performed.

Further direction and guidance was provided by the UO CPFM team during the kick-off meeting. The meeting included representatives from Campus Planning, Project Management, and Energy & Utilities Management.

General Summary Statement

Deady Hall is listed on the National Register with the elevated designation of National Landmark. This designation is the highest recognition offered to a historic building by the National Park Service, making it significant not only to the regional campus and city of Eugene, but also to the nation. It is with this historic status that Deady Hall should be prioritized by the University of Oregon for complete rehabilitation.

Deady Hall established the University of Oregon's campus as an iconic landmark in 1876, but its exterior conditions and surrounding walkways are deteriorating, building systems are outdated, and the interior program no longer represents the original design intent nor does it meet modern goals identified by the UO Campus Plan. Improvements in the following categories are recommended to rehabilitate Deady Hall to meet current campus and building standards with respect to its period of significance, between 1876-1914.

Exterior Envelope

Most of the original exterior historic fabric remains, including the brick walls, operable wood windows, bracketed wood cornice, and Mansard towers. Although some features have been replaced in-kind over the years, including the reconstruction of decorative wood urns along the roof line, all materials are currently in fair condition requiring some level of maintenance. A protective sand-painted coating covering the brick walls dates back to the 1890s, but has been allowed to degrade, mortar joints are failing, the concrete stairs and ADA ramp are cracked, and wood components such as decorative urns and the parapet are rotting. The roof, restored during the 2000s repair campaigns, is in sound condition but the wood shingles are stained and the paint finish is deteriorating. The windows, recently restored, are in good operable condition but do not meet current energy standards like all historic windows over 100 years of age.

Recommendations

Perform a complete cleaning of all exterior elements using the gentlest means possible. Typical brick masonry repairs are required such as spot repointing and patching. The finish coat requires reapplication. Decorative wood elements require repair along the parapet, and all painted features - including the roof - need refinishing. Windows require basic restoration - repairing putty, balancing operable sashes, and weatherstripping at a minimum. Upgrades to acheive improvemed engery performance, from least to most impactful, include adding a low-e window film to existing glass, adding exterior storm SLIPS to each existing sash, or replacing existing glass with double-pane insulated glass units within the existing sash.

Structural System

Based on available record drawings, it is assumed that Deady Hall's structural system consists of unreinforced masonry (URM) exterior bearing walls and wood beams and columns supporting solid-sawn wood joists and sheathed floors at the interior. The basement floor is a concrete slab-on-grade, with conventional concrete spread and strip footing foundation. The added mezzanines are constructed of conventional wood joists and floor sheathing. The structure also features the unusual condition of soil and straw packed between floor joists at the first, second, and third floors perhaps as an early acoustical treatment.

The building currently does not show any signs of significant stress in the form of settlement cracking at the interior or exterior, floor deflections, or excessive floor vibrations. However, as a typical URM building of its time, it is likely the structure would experience considerable damage in the event of an earthquake and poses a high degree of risk for occupants.

Recommendations

Given that the interior east-west running corridors do not stack vertically, perimeter shear walls – either shotcrete or cast-in-place – are the most viable option. Additionally, floor diaphragms require new plywood sheathing and connections between the URM walls, girders and columns need to be strengthened, and moment frames installed in the two towers. Recommended interventions should seek to limit impacts to historic fabric and character-defining features, and salvage and reinstall features such as historic trim.

The recommended retrofits are intended to bring the building up to a Life Safety standard. To preserve the building in a seismic event, base isolation is required in addition to a modified version of the aforementioned retrofits.

Mechanical

Currently, the electrical and IT systems are collocated with mechanical equipment in the boiler room. The existing room is too small to house the recommended replacement mechanical system in addition to upgraded electrical and IT systems. Creation of separate spaces for electrical and IT adjacent to the mechanical room is recommended.

Deady Hall is heated by steam radiators connected to the campus system and naturally ventilated through operable windows, except for ceiling exhaust fans in the restrooms. No mechanical cooling is currently provided. The entire system is well beyond the end of its service life and due for replacement.

Recommendations

The recommended replacement system includes a new steam to hot water heat exchanger (shell & tube) served by existing campus steam main, two new heating water pumps, wall mounted induction or fan coil units, and finned tube radiators in some entry areas to replace radiators and provide heating and cooling throughout the building. Tying into the campus chilled water mains is recommended to provide chilled water for the building, and two new chilled water pumps with chilled water piping will serve the wall mounted induction units. Controls will be upgraded to the new DDC system tied into the campus central interface. Ceiling fans will be utilized as the first stage of cooling with the existing operable windows.

Three potential options for ventilation air were explored with significant differences in space requirements and impacts to historic spaces and the building exterior. All three options assume the same proposed heating system.

Option 1: A heat recovery ventilator will be located in a second basement mechanical room, likely south of the elevator, to provide ventilation air and exhaust

for the building. In addition to the one existing louver in the easternmost basement window opening, three more louvers will replace original windows, as well as allocation of additional adjacent basement space for mechanical. Removing windows will have a significant impact on the exterior appearance. Ventilation supply air and exhaust will be ducted vertically in a shaft adjacent to the elevator shaft and distributed to all spaces. This duct work, either exposed or concealed, will have a substantial impact on the historic character of the interior.

Option 2: An air handling unit in a second basement mechanical room, likely south of the elevator, will provide ventilation air for the building through an existing louver. One additional basement window opening will be required (two total on the south elevation) for intake louvers. Exhaust will be discharged in one tower at the existing attic open areas near the roof with no exterior impact to the tower. Location of the heat recovery coil, the exhaust fan, and piping between the two will be challenging and may impact the interior character of the spaces. This is a preferred option with minimal impact to the exterior and moderate impact to the interior.

Option 3: Only natural ventilation will be provided for the building via the existing operable windows (with proper operablility restored) with the aid of new ceiling fans. New exhaust fans will be installed at restroom and custodial areas. No additional mechanical space is required (leaving the space south of the elevator available for use as a separate IT room), no ductwork is needed, and the existing louver on the south elevation can be restored to a window. This is a preferred option that benefits the exterior with the removal of one louver and poses the lowest impact to the interior spaces. It also meets several Campus Plan policy patterns.

Plumbing

Domestic cold water enters the building from the tunnel. Domestic hot water is served by a steam heat exchanger. There is a mixture of galvanized and copper piping, as well as an inconsistent variety of plumbing fixtures. The entire plumbing system is well beyond the end of its service life and due for replacement.

Currently the building is sprinklered along the egress path (corridors and stairs) and not in offices and classrooms. The fire sprinkler system is not compliant with current code, is beyond the end of its service life, and is due for replacement.

Recommendations

Recommendations include a tank type electric water heater and hot water recirculation pump, new domestic cold water connection, replacement of all piping with copper, new sanitary waste and storm drainage system, and new historically compatible, energy efficient plumbing fixtures.

Complete replacement of existing sprinkler system with a new system per NFPA 13 that covers the entire building and ties into the existing 4” fire main in the basement mechanical room is recommended. Routing sprinkler mains in furred out areas along the exterior wall and above corridor ceilings will allow for sidewall heads in the classrooms and offices that provide coverage from both directions while keeping the ceilings free of piping. Sprinkler heads are to be fully recessed and concealed.

Electrical, Lighting & Technology

Currently, the electrical and IT systems are collocated with mechanical equipment in the boiler room. The existing room is too small to house the recommended replacement mechanical system in addition to upgraded electrical and IT systems. Creation of separate electrical and IT spaces adjacent

to the mechanical room is recommended. The existing fiber optic can be extended from the steam tunnel to the new main electrical/IT room via EMT conduit.

Recommendations
Recommended electrical and IT system upgrades include: switchboard and main circuit breaker replacement, replace and refeed panelboards one for one, integral surge suppressor protection device, reconnection of electrical service to medium voltage transformer by Villard Hall via existing conduits, new power connections for new plumbing and HVAC equipment, replacement of existing electrical sub-meters, new wire basket tray concealed in the corridor ceilings, new vertical chases for new telecom wiring, new telecom cabling from main IT room to data outlet locations, and new AV cabling for video and sound reinforcement in classroom and conference room spaces. All spaces require new receptacles and switches.

Replacement of the entire security system including devices is recommended. The new head end panel should be located in the new electrical / IT room. The fire alarm system should be replaced in its entirety. The new main panel should be located in the main IT room and a new annunciator located in the entry lobby. Emergency lighting should be added in the corridors and stairwells. Replacement of the elevator will necessitate an ADA-based emergency communicator panel at each elevator lobby and the main entrance.

All exterior and interior lighting is non-historic and inappropriate for the building's character. Interior replacement fixtures should meet campus standards and be historically compatible (possibly custom) energy efficient fixtures providing lighting appropriate for each type of interior space. New controls and sensors are required throughout.

Exterior fixtures should be limited to historically appropriate pendants in the east and west recessed entries and compatible sconces at the two secondary north entries. All other required exterior lighting should be provided by campus standard light poles. No additional fixtures should be mounted to the building. Lighting of the exterior area between Deady and Villard should be coordinated with alterations to that open space. An allowance for three campus standard light poles has been identified.

Fire and Life Safety
Corridors throughout the building are sprinklered, omitting occupied classrooms and offices as well as other support spaces. The current fire alarm system is code compliant, but at the end of its service life.

Paths of egress direct occupants to either end of the building at all floors and down the east and west stairwells. The furthest distance traveled to exit is less than 250', and according to Oregon building code this potentially eliminates the need for enclosed fire-rated stairs.

Current occupancy and educational standards recommend 20 SF per person in classrooms. The existing classrooms have 14 SF assigned.

Recommendations
The entire sprinkler system is beyond its service life and should be replaced and extended to all occupied rooms.

Further code analysis at the stairs and corridors are required, but it is recommended to open these stair cores to improve circulation and to restore interior volumes where possible.

Over-assigned seating should be alleviated at all classrooms.

Architectural

Originally constructed as a simple structure with three stories and stairwells flanking either end, Deady Hall has evolved over time based on campus needs that have compartmentalized and complicated spaces and circulation. The building currently houses the math department and is divided among classrooms, faculty offices, and graduate student offices. Based upon current building code recommendations and UO standards, classrooms are over occupied. Offices are tucked into stair corridors and behind elevator shafts, their placement sporadic. Also inconsistent are restrooms, which vary in location from floor to floor. Mezzanine levels that once led to open balconies are now enclosed and underutilized, often leading to dead end spaces. All of these issues combined make navigating Deady Hall inefficient and confusing.

Accessibility features meet current code but do not meet Universal Access standards. The current exterior ramp leading down to the basement level does not provide a similar entrance experience as the grand east and west main entrances. The location of the elevator is at the opposite end of the accessible entrance, adding to the inefficient circulation within the building.

Recommendations

It is recommended to congregate functions within the building, providing consistency in their placement between floors for improved wayfinding. Priority should be given to existing 1876 and 1914 spaces as identified in the following sections. Stairwells should be reopened, returning the corridors to their original volumes and at the same time providing needed social and meeting places for students. Proposed classroom and office spaces are simplified and of similar size, allowing for interchangeability between the two uses as needed. Mezzanines should be returned to 1914 full-height spaces where possible, eliminating the cramped floor to ceiling height throughout the building. All offices and classrooms should comply with UO Space Standards, and all displaced uses to be accommodated at other locations on campus.

Additionally, the exterior accessible ramp should be at minimum mirrored to the east end to provide direct access to the elevator, with improvements made at interior to create a welcoming basement level.

Civil/Site

Within the project boundary, site features include stepped concrete entrances on the east and west elevations of the buildings, an accessible ramp on the west end of the north elevation, and concrete pathways are on all sides of the building extending in multiple directions.

The walking surfaces of the two stepped entrances are in poor condition exhibiting failure of past repairs and cracking. The concrete pathways along the east and south sides of the building are cracked and damaged by tree roots, while the west and north side walkways are relatively new and is in good condition. Sidewalk slopes appear to exceed campus accessibility guidelines.

Deady Hall is currently served entirely by campus utilities and is not directly connected to City of Eugene or franchise utilities. In general, Deady Hall has adequate existing utilities serving the building. In some cases, the existing utilities are not well documented, do not meet code, or are in poor condition.

The existing campus water system has multiple cross-connections between fire lines and irrigation systems, which can pose cross-contamination issues. The building water services are connected to a line inside the utility tunnel located on the north side of the building at the east corner. The existing fire department connection exits the building at the northeast corner and extends around the bottom face

of the building along the north exterior wall, where the hose connection is located at the west end.

There are two sanitary sewer lines serving the building on the south side.

Deady Hall has four roof downspouts at the exterior corners of the building. These downspouts were recently replaced by the University. The new downspouts appear to be 3-inch stainless steel, with leaf traps at the bottom. When the roof drains were replaced, the below grade piping was abandoned in-place. Some cleanup of abandoned pipe is needed, especially where piping is exposed in the areaways. Existing storm drainage is not treated to current City of Eugene standards. The roof drainage is conveyed directly to campus storm piping. The site drainage sheet-flows into landscape areas, where it generally ponds and infiltrates.

Recommendations

The steps should be resurfaced and the central railing replaced with two historically compatible metal railings inboard of the stair side walls to reopen stairs. Replace damaged sidewalks with slopes and widths that meet campus accessibility standards. Reconfiguration of the accessible ramp will require reconstruction of a portion of the utility tunnel and relocation and reconnection of the utilities.

Rerouting the existing fire department connection (FDC) from the interior mechanical room, through the building, and to the existing location of the FDC will eliminate the negative impact caused by the current routing.

The existing 6-inch sewer line will need to be video scoped to determine the condition of the line and whether it will need replacement or can be retained and lined.

Installation of approximately eight new area drains around the perimeter of the building at low points in the existing ground is recommended. Connect the new area drains to the existing storm drainage system at the west side of Deady Hall with 4-inch pipes and cleanouts.

Sustainability

The Campus Plan, referencing the Oregon Model for Sustainable Development, calls for LEED Gold minimum certification as well as meeting the Advanced Energy Threshold (AET) requirement for facility performance of 35% more efficient than Oregon Energy Code.

LEED evaluates building credits using a variety of criteria including Sustainable Sites, Water Efficiency, Energy & Atmosphere, Material & Resources, Indoor Environmental Quality, Innovation & Design and Regional Priorities. LEED Silver certification requires 50-59 credits, while LEED Gold requires 60-79 credits. Hennebery Eddy developed an initial LEED scorecard (see Appendix) as a guideline for the design team to use in pursuit of this goal.

The scorecard is based upon LEED v4 for BD+C: New Construction and Major Renovation. Following the release of LEED v4 in 2013 (an updated and more technically stringent version of LEED v3), projects could continue to register under the LEED v3 rating system until October 2016. As of November 2016, all new projects are required to register using the LEED v4 rating system. With this newer version, the standards for sustainability have increased making LEED Gold certification more challenging. The scorecard for Deady Hall predicted a high potential to achieve LEED Silver, outlining a path to 55 probable credits. An additional 31 credits are possible that require further investigation, only 5 of which would be needed to meet LEED Gold certification.

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HISTORIC SIGNIFICANCE

As the first and oldest building on campus, Deady Hall is a primary historic resource at the University of Oregon. Opened in 1876 and designed by Oregon architect William W. Piper, the Italianate building with its iconic Mansard roof and towers dominated the once-barren field that was the University's campus. Today, Deady Hall rests at the center of campus, nestled between tall trees and surrounded by both modern and historic structures. While its surroundings have drastically changed over time, Deady Hall remains as a reminder of the University's confident yet modest beginnings. Although smaller in scale relative to its surroundings, its style, proportions, and significance are monumental.

Both its architectural design and associated history with the University's development has contributed to its recognition as a historic building. Deady Hall was listed on the National Register of Historic Places in 1972. It's significant under Criterion A for its representation of university campus planning as well as Criterion C for its Mansarded Italianate style that exemplifies campus buildings of its era. Its status was elevated in 1977 to a National Historic Landmark alongside its neighbor, Villard Hall, constructed in 1886.

Reference materials provided by the University of Oregon includes the following:

- University of Oregon Campus Plan, 3rd Edition, 2014
- Deady Hall Historic Assessment, Campus Planning, draft 2017
- Deady Hall: A Brief History of Construction and Alterations, Campus Planning, draft 2010
- Deady Hall Historic American Building Survey, 1964
- Deady Hall National Register Nomination, 1972
- UO Historic Resource Survey Form, Deady Hall, 2006
- UO Book Plans, 2008
- Record drawings dating from 1902 to 1993
- Historic photographs

CHANGES OVER TIME

The evolution of Deady Hall began early in the decades following the building's original construction in 1876. Key alterations include a 1914 renovation that added mezzanine levels and balconies to the upper floors, as well a subsequent renovation in 1952 to enclose these spaces. Today, the exterior of Deady Hall retains its original

configuration, but the interior is a conglomerate of original volumes subdivided by features from 1914 to the present. Features dating back to a period of significance between 1876 and 1914 are to be prioritized for the purpose of this assessment and all future rehabilitation recommendations.

1873 – William W. Piper commissioned to design Deady Hall by the University of Oregon

1876 – Construction completed and the first floor was opened for the University's first class of 155 students

1877 – Second floor opened for classes

1878 – Third floor opened

1891 – "Sand paint" applied to the exterior to match neighboring Villard Hall, constructed in 1886

1891-1892 – Decorative Urns and balustrades at the roof parapet removed due to deterioration. Wood shingles are replaced with composite tiles. These are not restored again until 1977.

1893 – Sewers; Indoor toilets installed at the basement level

1902 – Basement finished with a combination of offices and classrooms, and indoor toilets renovated. Basement stairs at the southwest and southeast corners are removed, and the stairs at the northwest and northeast corners are remodeled.

1914 – Major interior alterations include the addition of mezzanines between the first, second, and third floors, the addition of balconies overlooking classrooms and storage rooms at these mezzanines, complete removal of the southeast and southwest stairs, and remodeling of the northwest and northeast stairs. Skylights were also added at the third floor, and the third floor assembly room was subdivided into classrooms and offices.

1942 – The first floor mezzanine corridor infilled for use as a lab by the physics department.

1951 – Firewall improvements at all stair corridors include the addition of solid core doors leading to primary corridors and replacement of wood lath and plaster with rock lath and plaster.

1952 – Major interior remodel removes all classroom balconies, updates finishes and lighting to modern fixtures, and improves electrical and mechanical. The second floor mezzanine corridor floor is infilled.

1971 – HVAC upgrades.

1972 – Listed on the National Register of Historic Places.

1973 – Interior door reconfiguration and replacement.

1975 – Sprinkler system added to primary corridors and stairwells.

1977 – Included in a National Landmark Designation alongside Villard Hall.

1978 – Electrical upgrades.

1987 – Exterior fire escapes removed.

1988 – ADA upgrades include the installation of an elevator near the southeast corner of the building and a proposed exterior ramp leading to the basement level north elevation east entrance. Actual ADA ramp constructed leads to north elevation west entrance.

1993 – Electrical upgrades.

1994 – East tower restoration

2005 – South elevation restoration with lead paint abatement.

2006 – North elevation restoration with lead paint abatement.

CHARACTER-DEFINING FEATURES

Exterior

Deady Hall's exterior design and materials have changed little over its 141 year life. Features previously deteriorated or lost have been restored over the past few decades, including decorative wood urns atop the roof and replacement of the exterior stairs in the early 20th century. Other exterior alterations have been limited to providing an accessible point of entry, ventilating mechanical equipment, and historical changes to windows related to the insertion of mezzanine levels in 1914.

Exterior character-defining features include:

- Building form and mass
- Italianate style and Mansard roof/towers
- Projecting chimneys (decomissioned)
- Symmetry of elevations
- Grand West and East entrances
- Materials including coated brick masonry and associated details, cast-zinc ornament, and wood ornament
- Pattern, type, size, and shape of fenestration

Interior

Deady Hall's interior configuration has gone through two major alterations - one in 1914 adding mezzanine levels, corridors, and dividing up the third floor, and one in 1952 removing much of the mezzanine accessed spaces, reconfiguring classrooms and offices, and replacing doors and finishes throughout. Remaining historic materials and small scale features are minimal, however many spatial qualities and some classroom and office locations dating back to both 1876 and 1914 remain intact.

Image 1: Deady Hall's three-story symmetrical mass with horizontal bands of windows and a mansard roof are all contributing character-defining features.

Image 2: The grand west elevation entrance with prominent concrete stairs.

Image 3: A typical double-hung window with rowlock brick arches and a cast metal keystone and sill.

Interior character-defining features include:

- East and west entrance/stair lobbies
- Central corridors on the first and third floors and basement level
- East and west stairs - including stair construction, hand railings/balustrades, and fall protection window railings
- Tall volume of spaces flanking the corridors at floors 1-3
- Third floor tall volumes with angled walls and deep window sills
- (2) 1876 classrooms - 1,715 SF combined, (1) at the first floor and (1) at the second floor
- (3) 1914 classrooms - 2,267 Sf combined, (1) at the first floor and (2) at the second floor
- (9) 1914 offices - 1,261 SF combined, (2) at the first floor, (2) each at the first floor, second floor, second floor mezzanine, and third floor, (1) at the first floor mezzanine

The diagrams beginning on the following page identify remaining character-defining features that should be considered for restoration in all future rehabilitation work. Spaces and features identified in these diagrams informed the proposed interior schemes presented in the Architectural Section 1.06.

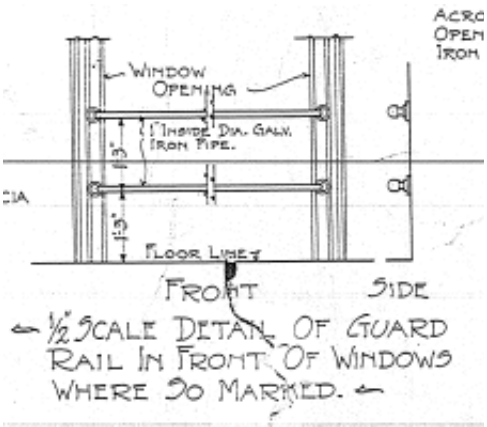


Image 7: 1914 drawing detail of fall protection railings at window locations within the stair corridors.

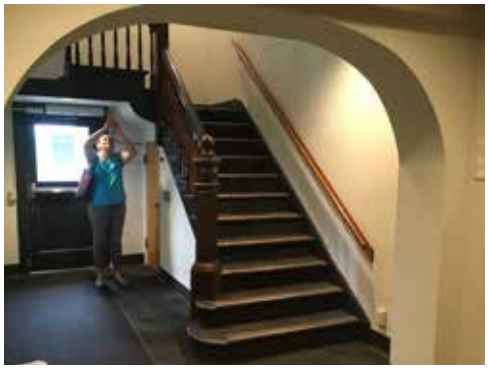
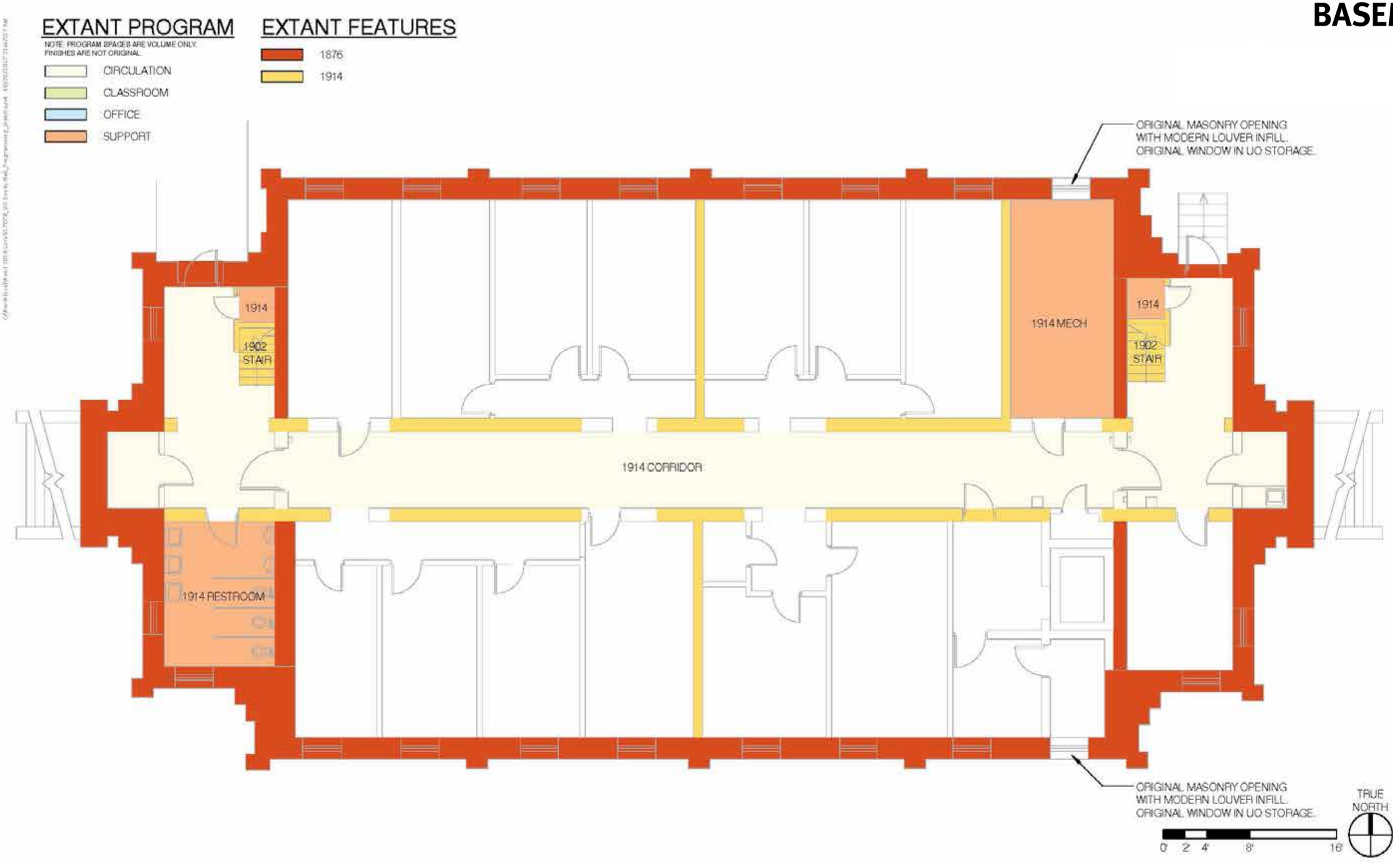


Image 4: One of two basement entrances at the east and west ends of the building, with character-defining stair lobbies and arched openings.

Image 5: One of two stairs dating from 1914 at the northeast and northwest corners of the building.

Image 6: A typical third floor classroom volume with tall ceilings and full-height dormer windows.

BASEMENT


EXTANT PROGRAM
NOTE: PROGRAM SPACES ARE VOLUME ONLY. FINISHES ARE NOT ORIGINAL.
CIRCULATION
CLASSROOM
OFFICE
SUPPORT
EXTANT FEATURES
1876
1914
ORIGINAL MASONRY OPENING WITH MODERN LOUVER INFILL. ORIGINAL WINDOW IN UO STORAGE.
1914
1902 STAIR
1914 MECH
1914
1902 STAIR
1914 CORRIDOR
1914 RESTROOM
ORIGINAL MASONRY OPENING WITH MODERN LOUVER INFILL. ORIGINAL WINDOW IN UO STORAGE.
TRUE NORTH
0' 2' 4' 8' 16'

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FLOOR 1


EXTANT PROGRAM
NOTE: PROGRAM SPACES ARE VOLUME ONLY. FINISHES ARE NOT ORIGINAL
CIRCULATION
CLASSROOM
OFFICE
SUPPORT
EXTANT FEATURES
1876
1914
1914 STAIR
1914 CLASSROOM
1914 STAIR
1914 STAIR
1876 CORRIDOR
1914 STAIR
1914 OFFICE
1876 CLASSROOM
1914 OFFICE
WINDOWS REPLACED IN 1914, TYP.
TRUE NORTH
0' 2' 4' 8' 16'

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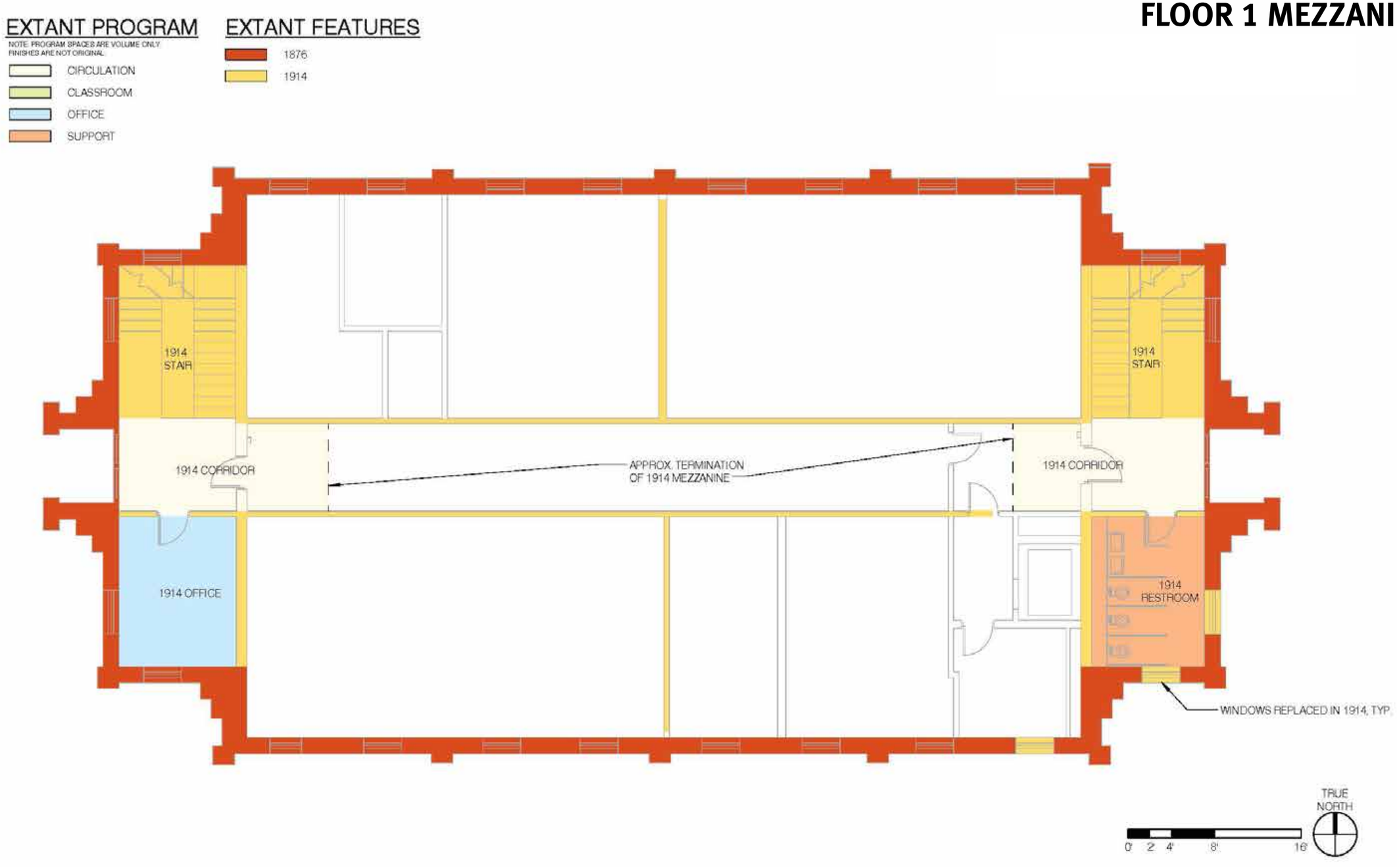
FLOOR 1 MEZZANINE



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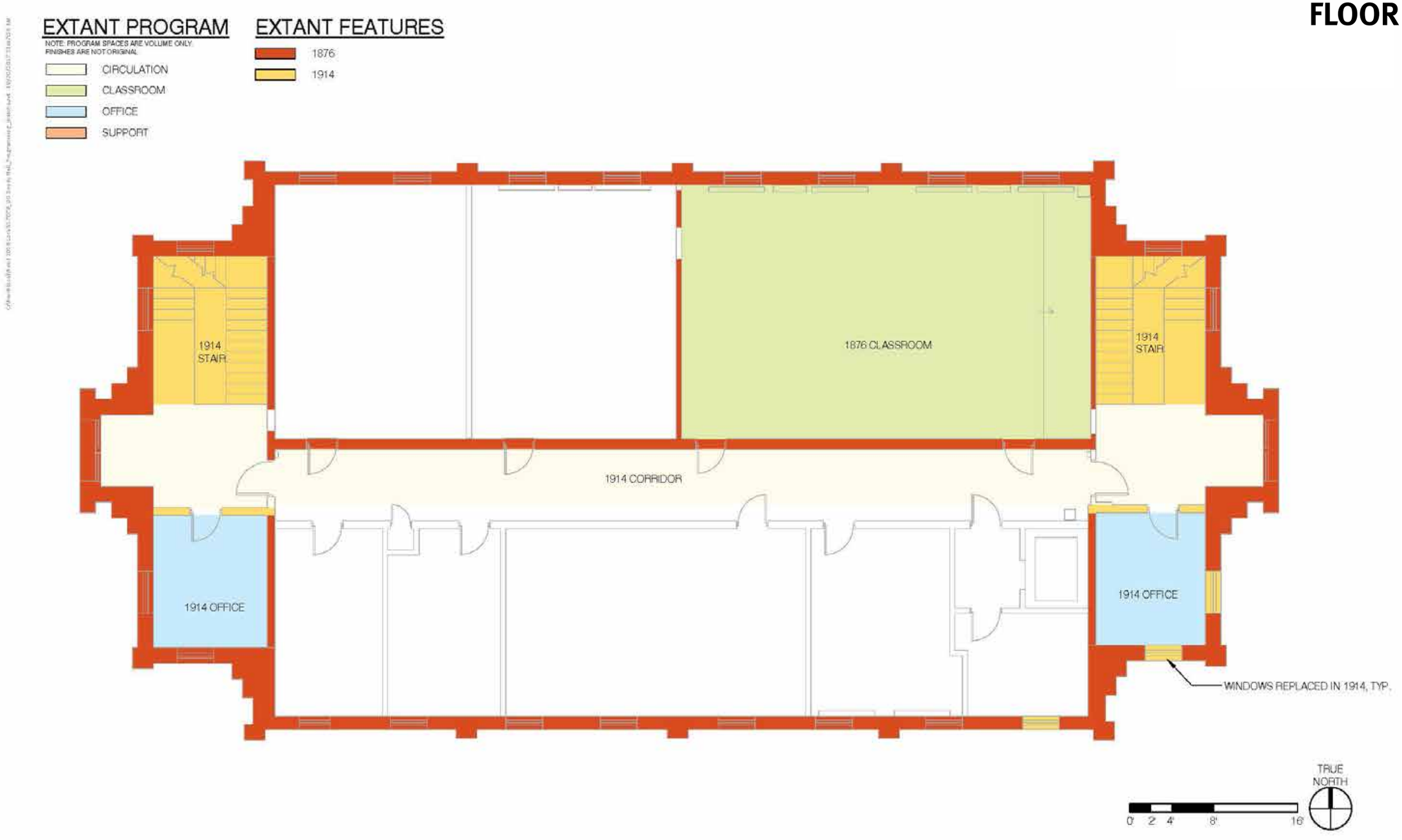
FLOOR 2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1876 CLASSROOM
1914 STAIR
1914 CORRIDOR
1914 OFFICE
1914 OFFICE
WINDOWS REPLACED IN 1914, TYP.
TRUE NORTH
0' 2' 4' 8' 16'

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FLOOR 2 MEZZANINE

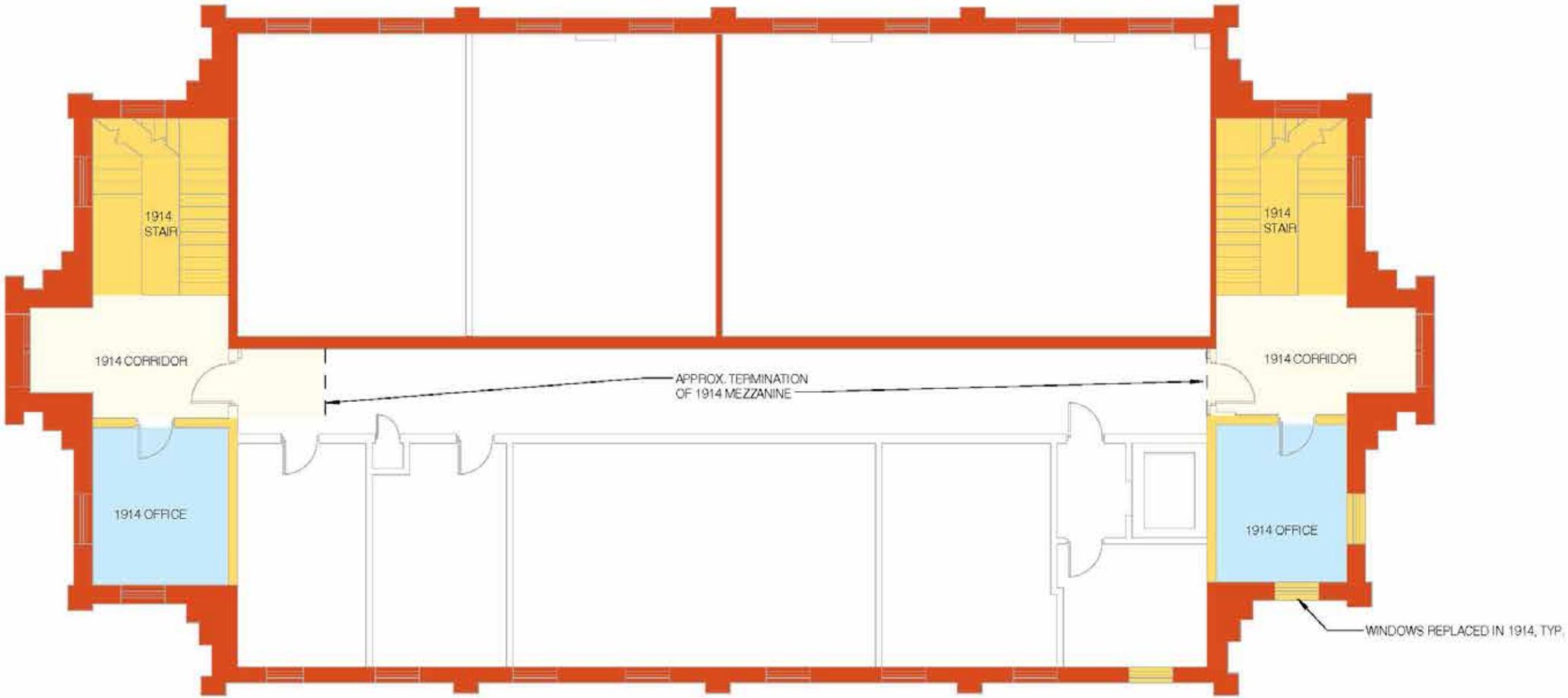
EXTANT PROGRAM

NOTE: PROGRAM SPACES ARE VOLUME ONLY. FINISHES ARE NOT ORIGINAL.

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT

EXTANT FEATURES

- 1876
- 1914



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FLOOR 3

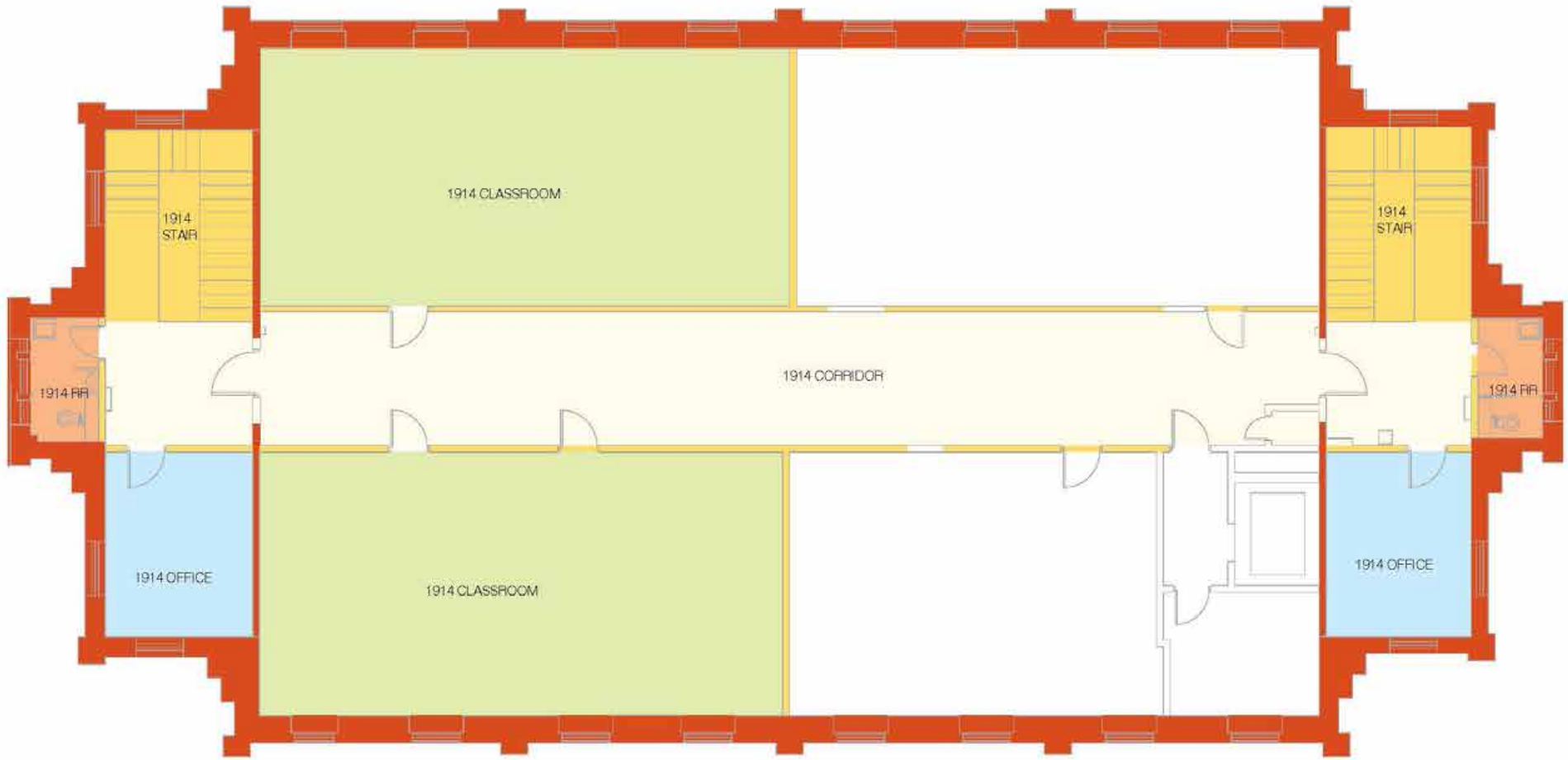
EXTANT PROGRAM

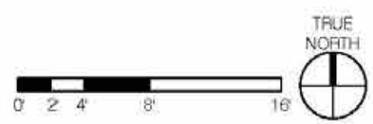
NOTE: PROGRAM SPACES ARE VOLUME ONLY.
FINISHES ARE NOT ORIGINAL

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT

EXTANT FEATURES

- 1876
- 1914





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CAMPUS & PRESERVATION STANDARDS

Balancing an evolving university environment with preserving unique historic campus resources requires attention to both forward-thinking campus goals and preservation best practices. The development of recommendations for the rehabilitation of Deady Hall was guided by the University of Oregon Campus Plan and the Secretary of the Interior's Standards for the Treatment of Historic Properties (the Standards) – specifically the Standards for Rehabilitation.

UO Campus Plan

The Campus Plan includes policies and patterns intended to shape the development of the campus. While most are primarily applicable to new construction, the following policies will likely apply to the rehabilitation of Deady Hall. Given Deady Hall's designation status as a National Historic Landmark, major alterations or additions to the exterior are not recommended and therefore patterns related to major exterior changes and future expansion have not been included.

Policy 2 – Open-Space Framework

As opportunities arise, the fundamental and historic concepts of the university's open-space framework and its landscape shall be preserved, completed, and extended.

Open-space Framework

- Deady Hall is flanked by Designated Open Spaces – Deady Hall Walk Axis (west) and Old Campus Quadrangle (east). Rehabilitation work should not negatively impact these spaces.
- Consider designating the space between Deady and Villard as open space, which was the first open space between buildings on campus. This would improve the character of the space and restore the relationship between the two buildings. Ensure this space is designed sympathetically to both buildings, providing a mutually beneficial area for all.
- Existing pathways within the project area should be repaired where existing slopes do not meet accessibility standards.

Policy 5 – Replacement of Displaced Uses

All plans for new construction (buildings or remodeling projects) shall keep existing uses intact by developing and funding plans for their replacement.

Existing Uses/Replacement

- Rehabilitation programming proposes to retain the math department as the primary user with the goal to maintain a balance of classrooms and offices similar to the existing conditions.
- If the area between Villard and Deady is designated as open space, all displaced bicycle and vehicle parking will need to be replaced. All proposed bicycle parking should comply with the UO Bicycle Management Program.

Policy 6 – Maintenance and Building Service

The university's campus and facilities shall be designed to meet long-term university needs and to be efficiently maintained and operated.

Flexibility and Longevity

- The rehabilitation design, taking into consideration Deady Hall's historic configuration of two general sizes of spaces (classroom and office) flanking the central corridor, shall allow for flexibility in organization of these two space types and options for configuration within each space type.
- Recommended structural retrofits and MEP upgrades will be long-lasting and carefully planned, located, and enlarged for adequate capacity.
- MEP systems shall be routed primarily through corridor ceilings or soffits and exterior or permanent walls to allow for future flexibility of partition wall locations.

Materials and Operations

- The rehabilitation design shall dictate high-quality, durable materials and finishes that require a low level of maintenance and minimize the need for specialty personnel
- The recommended use of materials requiring more frequent maintenance or specialty personnel requires further justification
- Recommended fixtures, hardware, light fixtures, etc. will likely deviate from the campus standard at the interior and exterior entrance porches to maintain compatibility and appropriateness with the historic Landmark building. These shall be consistent throughout the building. All other exterior light fixtures should be campus standard light poles.
- The existing service area is north of the building in the accessible/service parking area. If this area is redesigned or removed further consideration will need to be given to how service vehicles, loading, delivery and garbage collection will occur.
- The building is currently and will continue to be served by the utility tunnel system.

Policy 7 – Architectural Style and Historic Preservation

Preserve the overall visual continuity and quality of the campus and commit to the preservation and rehabilitation of identified historic resources.

Architectural Style

- The rehabilitation project will follow the Secretary of the Interior's Standards for Rehabilitation.
- Historic exterior character-defining features will be retained and repaired or restored.
- The secondary building entrances on the north elevation will be improved as secondary entrances with detailing compatible with the historic character of the building.

Historic Landscape

- Exterior rehabilitation will not negatively impact the surrounding historic landscape of the Old Campus Quadrangle. However, it is recommended that landscaping immediately adjacent to the building and tree limbs encroaching on the building or obscuring historic view of Deady Hall be maintained away from the building, with consideration given to protection of historic trees - specifically the Big Leaf Maple.
- Sidewalk repair work should consider protection of historic trees.

Policy 8 – Universal Access

In addition to complying with applicable federal and state requirements, the university is committed to making all new facilities welcoming and accessible to all users without discriminating on the basis of ability. This inclusive environment enables all users to participate equally in the university's programs, activities, and services.

Universal Access

- North entrance, elevator, and restroom improvements are all intended to improve universal accessibility within this Landmark historic building.
- All spaces will be universally accessible except for two of the six proposed hearth spaces that are only accessible via the west stair. The Landmark status of the building and the proposed restoration of the original corridors removes access to these spaces at the two remaining west mezzanine landings, equal spaces are provided on the four other main floors.

Welcoming to All

- Bringing the accessible entry to the east end of the north elevation, closer to the elevator, and recommended improvements to the accessible entry lobby are intended to create a more welcoming and thoughtful accessible entrance.

Policy 10 – Sustainable Development

All development, redevelopment, and remodeling on the University of Oregon campus shall incorporate sustainable design principles including existing and future land use, landscaping, building, and transportation plans.

Sustainable Development / Use Wisely What We Have

- Recommended improvements should seek to achieve LEED Gold certification and meet the Advanced Energy Threshold (AET)) required performance improvement of 35% over Oregon Energy Code.
- Wise and efficient rehabilitation of Deady Hall preserves a highly significant historic resource and its surrounding historic open space.

Operable Windows

- Deady Hall currently features operable double-hung and pivoting wood windows. The rehabilitation design should maintain window operability and include natural ventilation in the mechanical design.

Quality of Light

- Deady Hall's existing tall exterior windows provide ample daylight. The rehabilitation should seek to restore historic interior windows, glazed doors, transoms, sidelites, and skylights to bring natural light further into the building.

Policy 11 - Patterns

Patterns established by the Campus Plans express commonly held values as they pertain to the campus environment and design. They are statements that describe and analyze design issues and suggest ways in which those issues might be resolved. Applicable patterns have been included in the above policies. Additional relevant patterns included:

Organizational Clarity / No Signs Needed

- The current configuration of Deady Hall is disorienting. Each floors' configuration and finishes are different, restrooms are in various locations, and the mezzanines provide little functional space. Rehabilitation efforts should focus on creating a clear organization and circulation scheme consistent from floor to floor.
- Restoration of transparency - reintroducing interior windows and door glazing, opening corridors, and reestablishing views to the exterior – as well as consistent location of spaces and thoughtful finish selection will improve clarity and improve one's ability to self-guide.

Building Hearth

- Deady Hall does not currently provide easily identifiable social gathering space. Students cluster around chalk boards in the hallways or linger in the stair landings. The rehabilitation design establishes recognizable hearth spaces.

Places to Wait

- Deady Hall offers wide corridors and generous stair landings where places to wait can be designed and planned for.

The Secretary of the Interior's Standards for Rehabilitation

The Standards are intended to be applied to specific rehabilitation projects in a reasonable manner, with consideration of both economic and technical feasibility, and are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

RECOMMENDED TREATMENT APPROACH

In analyzing the original internal organization of Deady Hall as compared to the post-1914 and post-1952 remodel conditions, it becomes clear that it would be difficult to restore the building to any one period in time. Much of the original interior has been completely altered leaving only spatial volumes intact. No drawings of the original floor plans as constructed exist, limiting the potential for true restoration of the building to that era. Additionally, the original floor plans - particularly where there were four classrooms and no corridor - are not feasible for modern university use. The 1914 remodel, including the insertion of the mezzanine levels, is arguably significant in its own right, however, a majority of the balconies and other spaces accessed by the mezzanine corridors were subsequently removed. The remaining 1914 fabric is limited to the stairs and mezzanine landing floors, with connecting mezzanine corridors that negatively impact the floor to floor height and serve no useful purpose. The 1952 remodel essentially removed all remaining historic interior finishes, rendered the mezzanine corridors functionless, and dramatically reduced transparency by replacing interior glazing and doors with transoms and sidelites with solid walls and doors.

Based on the extended period of significance and the limited interior integrity, we recommend a hybrid approach to rehabilitation, taking the best from both the 1876 and 1914 periods. The exterior of the building should be predominately restored to its 1876 state with the exception of retaining the protective coating on the brick and allowing for an accessible entry and entrance lighting. Treatment of the interior should seek to preserve the functional remains of the 1914 mezzanines - the stairs and mezzanine floors at both the east and west ends of the building - while restoring the original volumes and transparency for quality of light where possible. Structural interventions and systems upgrades

should be accommodated in a way that they are concealed and cause minimal impact on the historic character of the interiors, including the preservation of original floor plates with soil and straw infill.

Consideration should also be given to organizational logic, current code and accessibility requirements, university standards, and user needs. Many of the Campus Plan patterns were original concepts in this building or can easily be incorporated, and are also good preservation practice, including the concepts of Flexibility and Longevity, Universal Access, Welcoming to All, Operable Windows, Quality of Light, Building Hearth, and Places to Wait. Particular attention should be paid to implementing Organizational Clarity to resolve the inconsistent and disorienting layout and finishes from floor to floor.

All recommendations should comply with the Secretary of the Interior's Standards for Rehabilitation.

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Building Exterior 1. 03

Deady Hall is most recognized for its exterior Italianate design comprised of brick masonry construction capped with a mansard roof with distinctive dormer windows and towers. Most of the original exterior historic fabric remains, including brick walls, double-hung wood windows with decorative cast zinc trim, wood doors at the east and west entrances, a bracketed wood cornice, and tall crested towers. Other items have been replaced in kind on the exterior, such as the wood shingled roof and wood parapet with urns. A protective grey sand-painted finish coat covering the brick, originally applied in the 1890s to match neighboring Villard Hall in appearance, is extant, although deteriorating.

The following exterior assessment findings and recommendations are based on visual observation from the ground. All visible materials, as well as key features such as entries were assessed. No destructive investigation or laboratory testing was conducted. Observations were recorded in the field using digital photography and digital field forms on tablets. For quick reference, recommendations are also organized into a treatment spreadsheet. Field forms and treatment spreadsheet are provided at the end of this section.

MASONRY

The exterior walls of Deady Hall are exposed face brick masonry with a finish coat applied to the surface. The elevations are decorated by projecting belt courses at each level with dentils at the second and third floors, brick pilasters, and rowlock brick arches surrounding window and door openings. The original brick units are 7-1/2" L x 2-1/4" H x 3-3/4" D in size, light red-orange in color, and laid in a common bond pattern. The bricks are stacked with a historic mortar that is light grey in color. A thin finish coat, approximately 1/8" thick, is believed to have been applied shortly after construction of the neighboring Villard Hall for consistency in visual appearance.

Stone masonry foundation walls are visible from the exterior window wells, but were inaccessible for this assessment.

Image 8: Detail of exterior masonry features that include brick pilasters, belt courses with dentils, and rowlock arches.

Existing Conditions

As historic brick, the units are relatively soft but intact, with some fractures and chips from external forces at exposed brick corners along the building perimeter and at entrances. Mortar joints are predominately intact, with areas of light cracking surrounding window and door openings. The lower 3' of the building perimeter is experiencing rising damp with the moisture contributing to deterioration of both the finish coat and mortar joints. Moisture levels were recorded at and above 20% Wood Moisture Equivalent (WME). A recording of 16% WME and below is typically acceptable.

Image 9: Deteriorating exterior finish coat reveals the original red-orange brick units.

The overall good condition of both the brick units and mortar may be credited to the finish coat, which covers all exterior masonry surfaces. The coating is deteriorating at all downspout locations, along the building perimeter, and at upper levels with high exposure to UV rays and winds. At areas where the coating is spalling, it is taking the brick fire skin with it.

Image 10: Detail of the exterior sand painted finish coat. At areas where the coating is spalling, it is taking the brick fireskin with it.

Noticeable patches and visual irregularities ranging 1 sf to 8 sf scatter throughout the elevations. These are a combination of modern brick infill and cementitious parging. The finish coat covers these patched areas, indicating the finish has been reapplied in recent decades. Additional inconsistencies in the exterior appearance are attributed to general atmospheric soiling and abandoned corroded metal anchors. The metal anchors, remnants of former exterior fire escapes, are leaving staining, and their expansion during corrosion threatens the surrounding brick units. At areas of high moisture (along the building perimeter and at downspout locations), there is active biogrowth.

Image 11: Typical exterior soiling and staining along the north elevation.

Recommendations

All exterior masonry components are assumed to be historic and should be maintained. Further investigation is required below window well grates to assess stone foundation walls.

Image 12: Detail of common crack locations extending from window sills and above arched openings.

Clean:

Clean all brick, mortar joints, and finish coating using hot water at very low pressure (‹100 psi). Use a natural bristle brush to remove any remaining biogrowth. Consider treatment with detergent for stubborn stains and biogrowth. Create a test area in an inconspicuous area to determine gentlest means possible without etching the surfaces.

Image 13: Overspray at downspout locations causing high moisture levels along the brick exterior, deteriorating the finish coat and mortar joints and causing high levels of biogrowth.

Repoint:

Areas of mortar deterioration and cracking should be repointed. A mortar analysis of the original mortar composition is required, and new project mortar should match in color, texture, composition, permeability, and tooling profile. All deteriorated mortar joints should be raked back to sound material prior to repointing.

Patch:

Areas of inappropriate brick infill and cementitious patching should be removed and patched with brick units to match the originals in size, shape, color, texture, and composition. Use salvaged brick units from other project areas within the building if possible. Damaged brick units that are fractured, chipped, or spalling should also be removed and replaced.

Unused and corroding metal anchors within the exterior brick masonry wall should be removed, typically at the former location of an exterior fire escape that existed in the middle of the 20th century. Patch resulting holes with the project mortar and finish to match adjacent coating.

Finish:

The finish coat dates to the turn of the century within the period of significance and serves as a protective barrier to the elements. Reapplying this coating to cover all exposed areas of brick is recommended. All areas of unstable coating should be removed, and all remaining finish coating should be cleaned per the above recommendations prior to reapplication. The new coating should be compatible with the existing and match in color, texture, composition, and permeability. The coating should be applied in the same 1/8" thickness unless further research uncovers other specification. A composition analysis of the existing coating is recommended to ensure this coating is compatible with the masonry wall, mortar, and any residual coating materials.

EAST AND WEST ENTRY STAIRS

The primary entrances at the east and west elevations are comprised of concrete stairs leading up to the first floor with concrete wing walls and a centrally located metal handrail. While the stairs appear to be original in location and configuration, they are recorded in

Image 14: Damaged exterior brick from an unknown external force.

Image 15: A common cementitious infill patch, typical at the north and south elevations.

Image 16: Detail of concrete exterior stairs along the east and west elevations. Tread noses have been patched (lighter in color) and a modern metal rail runs down the center of the stair.

historic documents as replaced, and the design of the concrete cap along the wing walls has changed over time.

Existing Conditions

The concrete steps are intact, with light hairline cracking and evidence of prior repair campaigns at the tread noses. The treads have a steep positive slope away from the building. The concrete wing walls are covered in hairline cracking. The concrete caps are cracked and spalling.

Recommendations

At minimum, all hairline cracking should be treated with an injection grout. Larger cracks and spalls along the wing wall caps should be repaired and patched. All patching and injection grout are to match the adjacent concrete in color, texture, and composition.

Consideration should be given to replacing the side wall caps and matching the original ornate caps shown in historic images.

The steep positive slope of the treads may be a safety hazard. See Civil recommendations for stair surface repairs. The slope of the treads may be leveled with the surface treatment.

The single central railing should be replaced with two metal railings compatible in design and flanking the stair inboard of the side walls.

Image 17: Detail of typical hairline cracking at concrete stair wing walls.

Image 18: Cracking and spalling along the concrete cap of the exterior stair wing walls, and continuous hairline cracking.

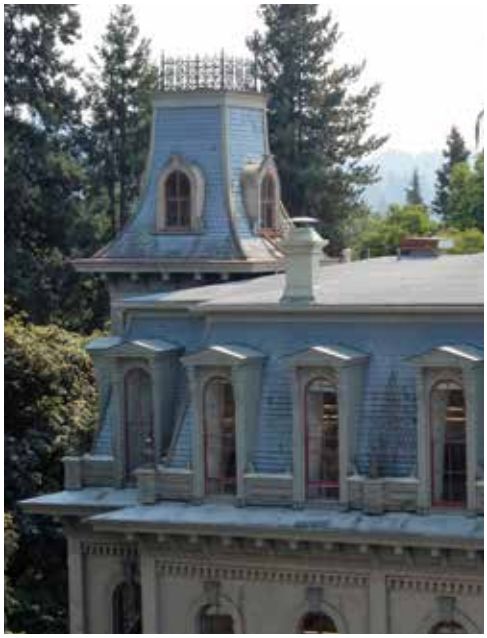


Image 19: The iconic mansard roof and tower at the east end, also mirrored at the west end. Wood shingles are weathered and the wood parapet shows signs of deterioration.

ROOF AND ROOF FEATURES

One of the most character-defining features of Deady Hall is its iconic mansard roof with towers flanking the east and west elevations. Dormered windows project from the north and south elevations at the third floor. The visible portions of the roof are treated with wood shingles painted a blue-grey. The skyward-facing portions of the roof are treated with a roof membrane.

Decorative wood elements include a wood parapet at dormer level wrapping the perimeter with detailed molding and wood urns at each pier. These wood urns were part of the original construction but had been missing for decades leading up to a major roof restoration in 1977. As part of the 1977 restoration, the wood shingles were also replaced and the wood parapet was repaired.

Existing Conditions

Today, the roof is intact but showing signs of wear. Wood shingles are soiled and their painted finish is deteriorating. At the parapet, wood elements that are in contact with the roof membrane below are rotting. The roof membrane itself appears to be in good condition but should be inspected by a qualified roof contractor.

Recommendations

Clean all roof components using hot water at low pressure (100-400 psi). Use a natural bristle brush to remove any remaining biogrowth. Consider treatment with detergent for stubborn stains and biogrowth. Create a test window in an inconspicuous area to determine gentlest means possible without etching the surfaces. Refinish any areas of deteriorated paint with paint to match the existing adjacent finish.

Wood elements that are rotted less than 25% should be treated with a two-part consolidant and refinished to match existing. Wood elements that are rotted more than 25% should be replaced in kind and finished to match adjacent units.

WINDOWS & SKYLIGHTS

The majority of exterior wood windows are original. These units are all arched-top double hung, true divided light, with single panes and putty glazing. The units are all approximately 3'-6" wide and vary in height from 5'-5" at the basement level and 10'-7"

Image 20: Detail of the roof membrane at the third floor dormers. Although stained, the membrane appears intact.

Image 21: Detail of rotting wood members hovering above the roof membrane at the wood parapet..

Image 22: A typical exterior double-hung window at the basement level. Units are true divided light with single panes and putty glazing. Recently restored, their painted finish is intact.

at the upper levels. Both the interior a and exterior surfaces are painted. Exterior wood window trim at the basement, first floor, and second floor is minimal and painted. At the dormered third floor windows, exterior wood trim is decorative, with bracketed vertical trim supporting wood pedimented hoods. Interior trim is also wood and painted. In addition, arched transom windows exist above all exterior doors.

During the 1914 interior renovation that subdivided the upper floors into mezzanine levels, the eastern most units along the south elevation were converted to pivoting sash with a horizontal mullion at the intersecting floor levels. These units are from the established period of significance, reflect the style of the original window types, and should be maintained.

Two skylights were installed in 1914 along the third floor corridor but were removed at an unknown date. The skylight shafts remain.

Existing Conditions

The wood windows appear to have been recently restored. All exterior finishes and putty glaze are intact, with some light cracking of putty glazing. Accessible double hung units operate smoothly with their weight-and-pulley system. While the single pane glass is intact at all locations, it is thermally inefficient. Arched transom units above the north elevation basement entrances have been infilled with opaque glass.

Two basement units, one each at the north and south elevations, have been replaced with wood louvers for mechanical ventilation. The original window opening and exterior trim remains.

Recommendations

Maintain all window units - including replacing broken sash cords, balancing, and repairing hardware - monitoring exterior putty glazing for cracking and repair as needed.

Image 23: One of six windows converted to pivoting sash with a broad horizontal mullion. These date to 1914 when the floor levels were subdivided with the introduction of mezzanines.

Image 24: One of two louvered window openings at the basement elevation. Original wood sash are believed to be held by UO in storage.

Image 25: One of two skylight shafts from 1914, currently enclosed, with pendant light fixtures.

Increasing the R-value of the single pane glazing should be considered for improved building energy performance, specifically at occupied rooms. Consider retention of single pane glass in areas that are character-defining and not critical for building energy performance, such as stairwells. At minimum, provide weatherstripping at all units and add a window film to improve UV filtration. Two additional options are proposed:

1. Include Slim Line Insulating Pane (SLIP) storm units at the exterior face of each sash.

2. Consider double pane glass. Sash thickness is substantial and could host new insulated glass panes.

If existing louvers are to be removed or relocated, replace louvered units with salvaged original sash (previously salvaged and stored by UO). If additional louvers are required, salvage and store window sash.

Restore transom window units above north elevation basement level entrances to restore historic appearance and to increase natural light at the interior stair lobbies.

Restore skylights in coordination with the interior program to bring more natural light into the building. Match the original units. Refer to 1914 drawing set for appropriate dimensions and style.

DOORS

Exterior door openings exist at the east and west main entrances as well as the east and west ends of the north elevation at basement level. Main entrances are double doors, full light, with an enlarged bottom rail. The current main entrance doors maintain the original door proportions as drawn in the 1914 interior renovation drawing set. Exterior hardware at these doors include brass pulls and potbelly closures.

Image 26: One of two arched transoms above the north elevation basement entrance doors. Original units were divided with a vertical muntin.

Image 27: Detail of sash bottom rail, interior ogee profile, and single pane glass. Sash thickness is substantial and could accommodate insulated panes.

Image 28: One of two exterior double doors that serve as the main entrances centered at the east and west elevations. Door slabs are weathered at the exterior. Transom units and trim are in good painted condition.

Interior hardware includes brass panic bars and kick plates.

Basement level doors at the north elevation have been replaced. Original units were five-panel with no lights according to historic images. Current units are half-light with single panels below and non-compatible stainless steel exterior pulls and interior panic bars.

Interior doors are predominately flush panel hollow core wood units with a stained finish. According to drawings dating 1973 and prior, these doors are not original and their openings have been relocated within the building. Original units were wood panel, with many being double doors with transoms above. Hardware is inconsistent throughout and includes round knobs and levers in a variety of finishes that do not meet ADA requirements.

Existing Conditions

Exterior doors are in sound condition with some finish deterioration. Main entrance doors at the east and west elevations are a stain finish that is weathering. Secondary entrance doors at the north elevation have a painted finish that is deteriorating.

Interior doors are in good, operable condition; however their style and hardware is incompatible with the historic fabric.

Recommendations

Refinish all exterior doors to match existing finish. Replace hardware at north elevation secondary entrances to be ADA compliant and compatible with main entrance doors in an antique brass finish or similar. Although these secondary entrance doors are not original, it is recommended to keep the units and their half-light openings for safety and visibility. An alternate would be to recreate five-panel slabs based upon historic images.

Image 29: Interior view of the first floor main entrance doors. Hardware includes brass panic bars and kick plates reminiscent of the historic period of significance.

Image 30: Door slabs at the north elevation basement entrances are half-lite modern replacements. Original units were 5-panel wood doors.

Image 31: A typical wood slab interior door, either hollow or solid core. Original interior doors had 4- or 5-panel wood slabs.

At the interior, relocate door locations per interior rehabilitation recommendations and replace all door slabs to match paneled historic units as drawn in the 1914 drawing set. Where doors are required to be metal or fire-rated per MEP recommendations, simulate paneled slabs where possible. All new interior door hardware shall match the main entrance exterior door hardware in style and finish.

MISCELLANEOUS WOOD FEATURES

Additional decorative wood elements outside of the roof at the building exterior include a bracketed wood cornice and wood molding between the second and third floors. All wood components are painted an off-white color.

Existing Conditions

All brackets and wood components are in good condition.

MISCELLANEOUS METAL FEATURES

Metal features at the exterior range from the obvious to the inconspicuous. Projecting above the towers at the east and west elevations is decorative iron cresting. Painted keystones and sills at window locations appear to be wood, but are in fact a cast metal. In addition, exterior metal handrails and metal thresholds offer support at the main entrances along the east and west elevation stairs.

Existing Conditions

Iron cresting appears to be in good condition from ground level. Cast metal sills and keystones are in good condition and finish is maintained. Metal handrails at the east and west elevation stairs bisect the formerly open stairs. The metal upper landing at each stair is corroding.

Image 32: Detail of exterior wood brackets in good condition that add to the Italianate style of Deady Hall.

Image 33: Cast metal brackets and keystones, painted with a sanded finish to match the brick finish, decorate door and window openings.

Image 34: One of two iron crested towers.

Recommendations

Further inspection of iron cresting is recommended to determine if finish is in good condition. Maintain painted finish at all cast metal sills and keystones. Replace handrails at east and west elevation stairs with historically compatible units along the wing walls. Treat corroding metal thresholds at each entrance stair landing with a rust inhibitor and refinish with a slip-resistant paint.

Image 35: An incompatible exterior sconce along the north elevation.

EXTERIOR LIGHTING

Exterior lighting is minimal. Fixtures include incompatible security lights with opaque housing at each entrance and a metal sconce centrally mounted along the north elevation at the first floor.

Existing Conditions

All exterior lights are contemporary units that are incompatible with the historic fabric and do not meet campus standards. The housing of each security light is yellowing from UV damage.

Image 36: A typical exterior security sconce used at entrances.

Recommendations

Replace security lights at the east and west main entrances with period-appropriate pendants. Replace security lights at the secondary north entrances with period-appropriate sconces. Use campus standard bulbs at all fixtures.

Remove security light along the north elevation and patch exterior wall per masonry recommendations.

Incorporate campus standard light poles within the adjacent landscape, specifically in the open area between Deady and Villard Halls.

Image 37: Perimeter landscaping encroaches upon the building at all elevations.

LANDSCAPING

When originally constructed, Deady Hall sat as the only feature in an empty field that was the University of Oregon campus. As part of campus development beginning in 1884, Douglas firs were planted along the "Deady Walk" to the west and big leaf maples within the "Campus Quad" to the east. Over time, additional landscaping was added surrounding the building perimeter that include English Holly. During the 20th century, Deady Hall was covered in ivy that has since been removed. Traces of ivy roots can still be found on the brick.

Existing Conditions

What were once small saplings adjacent to the Deady Hall property are now large trees. To the west, Douglas Firs frame the entrance to Deady Hall and remain a good distance from the building, posing no threat. To the east, the Big Leaf Maple, believed to be the sole survivor of the original 1884 campus planting, is now oversized, with large branches reaching out over the sidewalks and entrance to the building.

Shrubs surrounding the building perimeter are overgrown and touching the brick exterior, contributing to high moisture levels of the brick masonry and biogrowth.

Recommendations

Cut all vegetation at the building perimeter back to provide a minimum of an 18" clearance. Engage with experts at CPFM to assess the condition of the Big Leaf Maple to explore appropriate options to protect Deady Hall while preserving this significant tree.

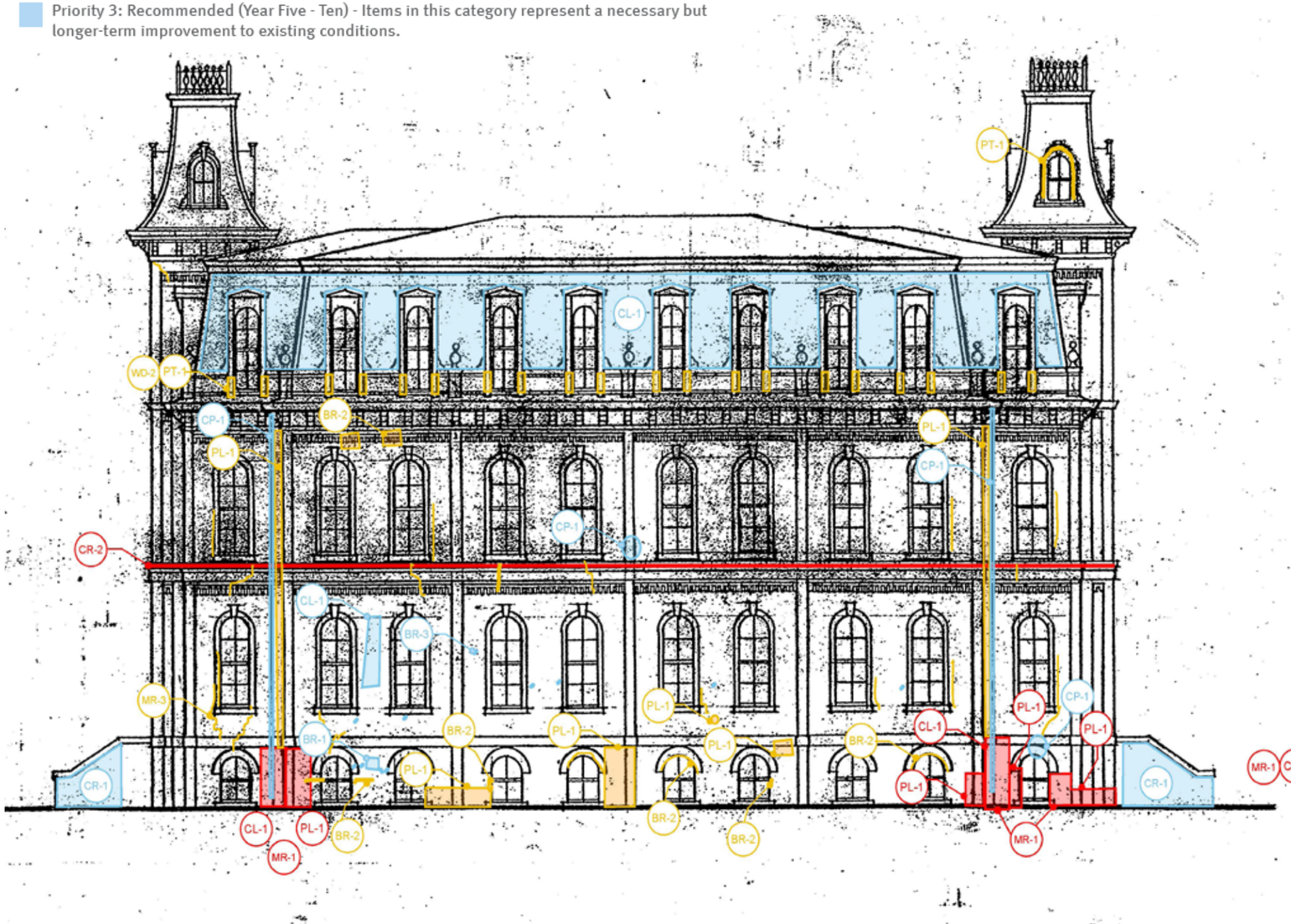
Image 38: Branches from the historic Big Leaf Maple at the east elevation hover above the main entrance steps.

Image 39: Douglas firs along Deady Walk to the west of Deady Hall.

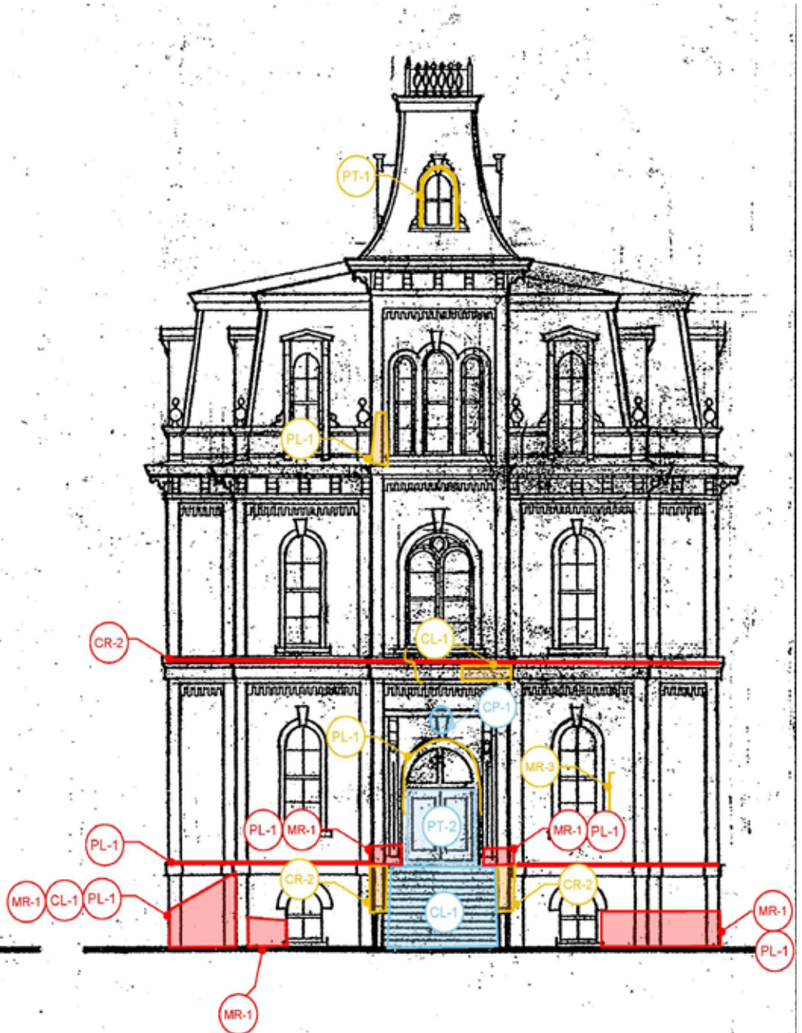
Building Exterior - Annotated Elevations

CONDITION PRIORITY KEY

- Priority 1: Critical (Immediate - Year Two) - Items in this category require action within two years.
- Priority 2: Necessary- Not Yet Critical (Year Two - Five) - Items in this category include conditions requiring prompt attention.
- Priority 3: Recommended (Year Five - Ten) - Items in this category represent a necessary but longer-term improvement to existing conditions.



NORTH ELEVATION



WEST ELEVATION

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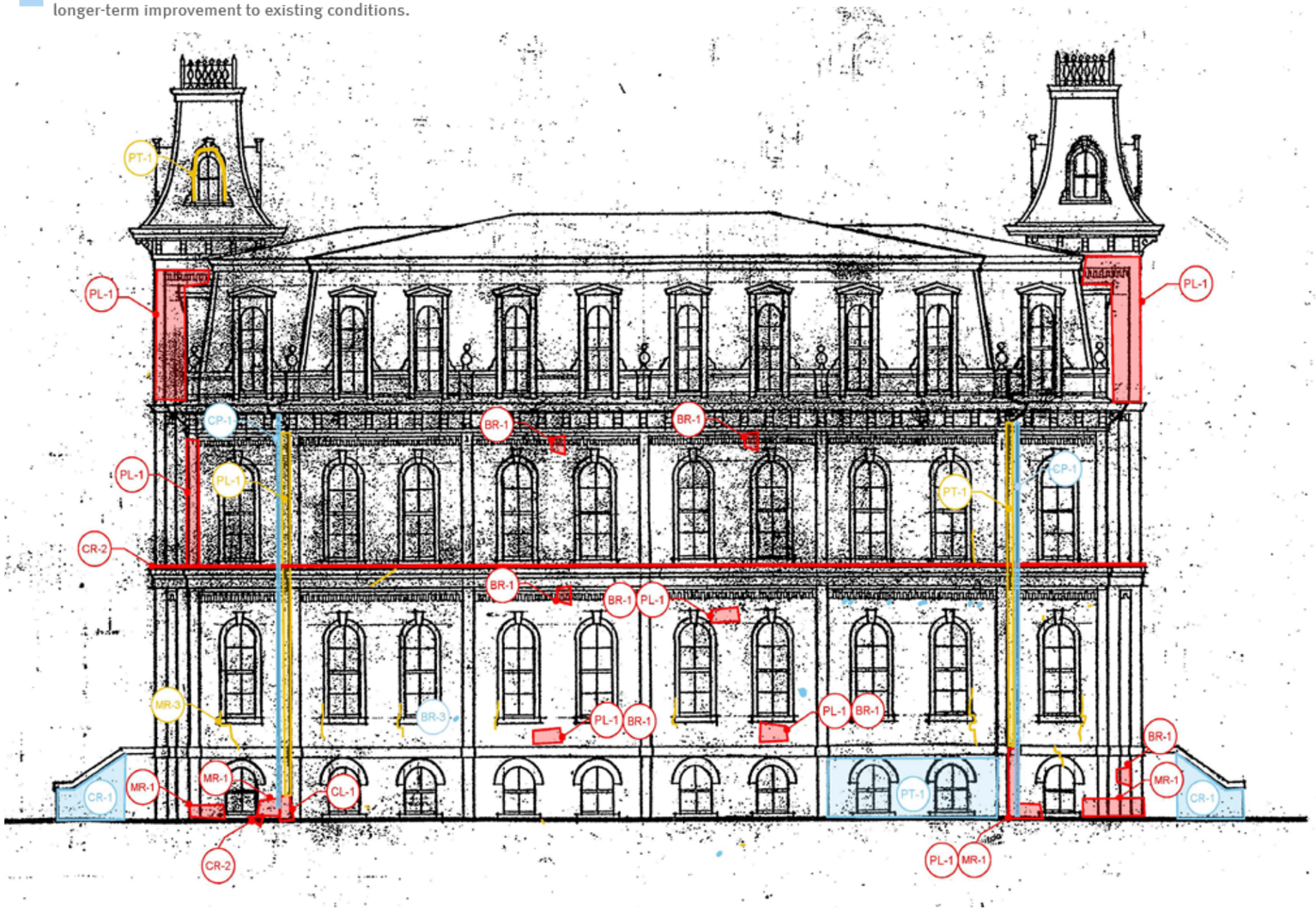
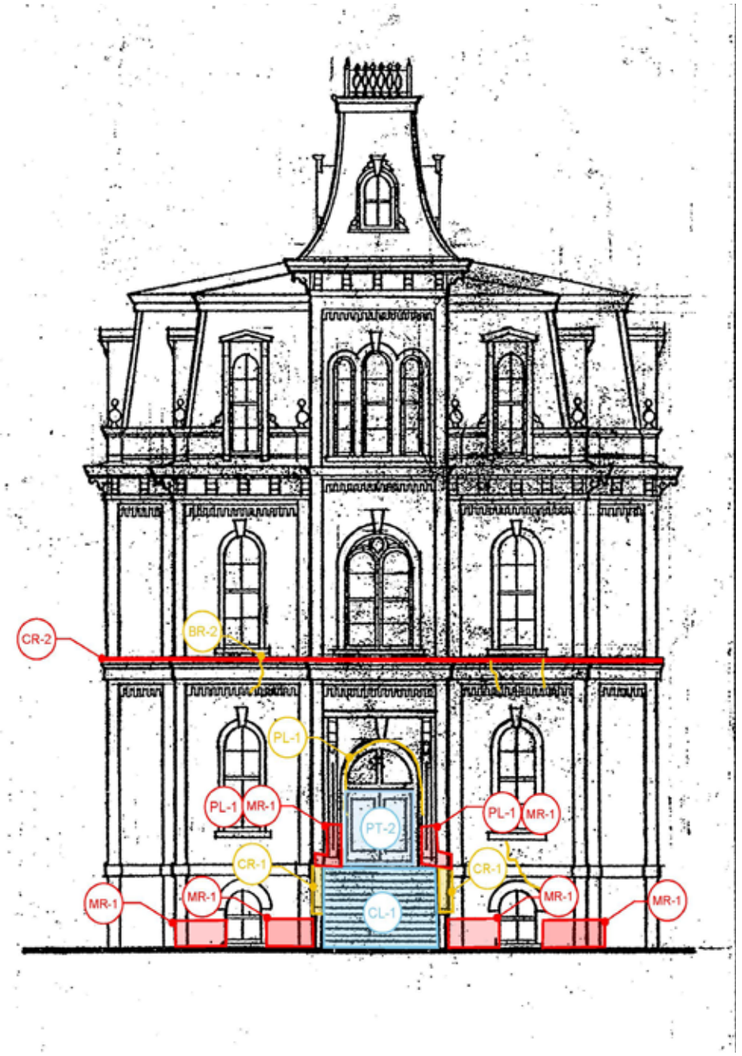
Building Exterior - Annotated Elevations

CONDITION PRIORITY KEY

- Priority 1: Critical (Immediate - Year Two) - Items in this category require action within two years.
- Priority 2: Necessary- Not Yet Critical (Year Two - Five) - Items in this category include conditions requiring prompt attention.
- Priority 3: Recommended (Year Five - Ten) - Items in this category represent a necessary but longer-term improvement to existing conditions.



SOUTH ELEVATION



EAST ELEVATION

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UO Deady Hall - Treatment Recommendations & Options

Architectural - Base Requirements											Additional Options & Alternates			
Division	Description	Repair Code	Condition	Qty	Units	Repair	Specifications/Products	Notes	Historic Allowance		Option/Alternate	Qty	Units	
03 Concrete	Concrete Parging	CR-2	Holes and minor spalls in sloped concrete parging on belt courses			Concrete spall repair	Repair with concrete patch							
	Concrete Stairs	CR-1	Crack in concrete wall or cap greater than 1/16" in width		LF	Concrete crack repair	Injection with cementitious mix, US Heritage Group IG10 Injection Repair Mortar or equivalent				Replace concrete cap to match original.			
	Concrete Stairs	CR-2	Holes and minor spalls in concrete wall or cap		SF	Concrete spall repair	Repair with concrete patch							
04 Masonry	All Exterior Features	CL-1	Biogrowth and soiling at all exterior brick, wood, and concrete elements	100	%	Pressure wash using very low pressure (<100 psi) and hot water with natural bristle brushes	Hot water wash preferred, consider detergent at stubborn areas such as Diedrick 101 Masonry Restorer, Envirestore 100, or equivalent for brick and coatings. Consider Diedrich 960 Concrete Cleaner at concrete.	Consider treatment with detergent for stubborn biogrowth - create test window to determine gentlest means possible without etching the surface						
	Coating	PL-1	Brick coating failure, spalling, cracking	100	%	Prep and refinish	Match historic sanded coating in texture and appearance. Composition analysis of existing coating required for compatibility with new coating.	See material specifications for USHG Heritage Hydraulic Lime Stucco/Plaster or equivalent - suitable for historic masonry in damp environments						
	Brick Masonry	BR-1	Brick missing or inappropriate infill		SF	Replace brick in kind, remove surrounding mortar, install new brick units	Match existing brick, match existing mortar strength, composition, and color	Check if campus has brick stock or use salvaged brick units from other restoration work, mortar testing is required						
	Brick Masonry	BR-2	Surface damage to brick		SF	Treat with recommended coating	Match historic sanded coating in texture and appearance	See Coating category above			Replace damaged brick units, matching existing adjacent brick (recommended if coating is not restored)		SF	
	Brick Masonry	BR-3	Corroding metal anchor within masonry wall, causing cracking and staining		EA	Remove unused and corroded metal component, patch using mortar to match existing, infill with new brick to match existing where necessary	Match existing brick and mortar color, composition, and strength	Anchors primarily leftover from former exterior fire escape at North elevation						
	Brick Masonry	MR-1	Localized mortar failure, cracking, individual points or small areas	25	%	Remove loose mortar, spot repoint damaged mortar	Match existing mortar strength, composition and color	Requires a mortar analysis	Y					
	Stone Foundation		Conditions unknown			Inspect for structural stability, cracking, mortar deterioration		Stone foundation at window wells inaccessible for visual assessment	Y					
05 Metals	Cast Metal Features	P-2	Light paint deterioration and soiling of metal tower cresting, chimneys, sills, and keystones			Prepare and refinish metal components	Match existing finish							
	Gutters/ Downspouts	CP-1	Downspout is not compatible with the historic style of the building	100	%	Paint to match color of adjacent exterior finish								
	Metal Treads	P-2	Treads at upper landing are corroding	2	EA	Prepare and refinish metal components	Rust-inhibiting, high-traffiic, and slip-resistant finish							
	Railings	CP-1	Existing single rails (2) at exterior entrance stairs are not compatible with the historic style of the building	4	EA	Replace existing single rail at each entrance with (2) rails inboard of side walls at each stair, for a total of (4) rails	Historically compatible							
	Wood Shingles	CL-1	Biogrowth and soiling of wood shingles at mansard roofs		SF	Pressure wash using low pressure (test 100-400 psi) and hot water with natural bristle brushes	Hot water only, paint to match adjacent finish where necessary				Spot replace rotted wood shingles and refinish to match existing	5	%	

Treatment Spreadsheet cont'd

UO Deady Hall - Treatment Recommendations & Options

Architectural - Base Requirements										Additional Options & Alternates			
Division	Description	Repair Code	Condition	Qty	Units	Repair	Specifications/Products	Notes	Historic Allowance	Option/Alternate	Qty	Units	
06 Wood, Plastics, and Composites	Exterior Window Wood Trim	PT-1	Paint failure, peeling, abrasion		SF	Prepare, prime and paint	Paints formulated for specific substrate	Color match to adjacent finish					
	Exterior Window Wood Trim	WD-2	Surface deterioration or minor damage such as gouges, localized rot, etc.		SF	Consolidation and epoxy repair	Two part consolidant, avoid fill or adhesive epoxies	Finish to match adjacent finish	Y				
	Exterior Window Wood Trim	WD-4	Wood rot on over 50% of a wood member	15	%	Replace rotted wood members in-kind	Match existing wood species, profiles, grain pattern, and finish	Finish to match adjacent finish		Replace rotted wood members	25	%	
	Exterior Wood Trim		Soiling and light surface deterioration of decorative wood components such as urns and cornice brackets			Refinish to match adjacent existing finish				Replace members rotted over 50% to match original feature in material, profile, and finish	10	%	
	Interior Window Trim	CP-1	Proposed seismic upgrades to increase wall thickness	100	%	Add window trim/sill/jamb extensions where requried	Match original wood profiles and finishes where known, salvage and reuse existing features where possible	Window trim extensions required in response to seismic upgrades and increased wall thicknesses, see structural recommendations					
	Interior Wood Trim	CP-1	Finishes not compatible with the historic style of the building			Restore all wood baseboards, original wainscot in corridors and classrooms, and picture rail in all classrooms and offices	Match original wood profiles and finishes where known						
07 Thermal and Moisture	Roof Membrane		No deficiences noted			Have roof inspected by qualified roofing contractor				Replace all membrane with modern roof system	100	%	
08 Doors and Windows	Exterior Sash	CP-1	Transoms above north basement entrances not original			Replace transom units with new sash	Match the original in size, profiles, glazing, and muntin configurations	See historic images					
	Exterior Sash		Poor energy performance	100	%	Add weatherstripping and exterior storm SLIPS to all sash	Chosen Window SLIP system or equivalent		Y				
	Exterior Sash	CP-1	Louvered inserts not original	2	EA	Removal and/or replacement of louvered openings as required by MEP	Reuse windows in University storage for replacements, and/or store any removed units for future reuse	See MEP recommendations	Y				
	Skylights		No deficiencies noted in capped skylight locations					Fixtures missing, see Additional Options for proposed restoration		Restore skylight openings and install new skylights to match 1914 units	2	ea	
	Exterior Doors	PT-2	Stain/clear coating failure, peeling, etc	6	Slabs	Prepare and refinish interior and exterior slabs, replace hardware	Match existing wood finish, replace all hardware with historically compatible units	Double door entrances at East and West elevations, (2) single entrances at North elevation		Restore North elevation basement entrances with 3-panel door slabs and restore divided light transom windows above	2	ea	
	Interior Doors	CP-1	Units not compatible with the historic style of the building		EA	Replace all modern interior doors with historically compatible units	Match original door configurations and finishes where known						
	Interior Windows and Transoms	CP-1	Units missing		EA	Restore transom and window openings with fixed units	Match the original in size, profiles, glazing, and muntin configurations	See 1914 drawing set					
	Flooring	CP-1	Finishes not compatible with the historic style of the building	100	%	Restore all floors to original wood finish	Match original wood finish where known			Replace existing VCT and carpet with historically compatible finishes	100	%	
	Walls	CP-1	Finishes not compatible with the historic style of the building	100	%	Restore all walls to gypsum and refinish	Match original paint finish where known	Interior face of exterior perimeter walls with new seismic shear walls to be furred out to conceal MEP					

UO Deady Hall - Treatment Recommendations & Options

Architectural - Base Requirements											Additional Options & Alternates			
Division	Description	Repair Code	Condition	Qty	Units	Repair	Specifications/Products	Notes	Historic Allowance		Option/Alternate	Qty	Units	
09 Finishes	Ceilings	CP-1	Finishes not compatible with the historic style of the building	100	%	Remove all ceiling tile and replace with gypsum and refinish	Match original paint finish where known	Lower ceilings over corridors to conceal accessible piping and wiring						
	Interior Stair	PT-2	Finish failure and surface wear at wood stair ballusters, paneling, stringers, landings, and treads and risers	100	%	Prepare and refinish	Match original wood finish where known							
	Interior Stair	CP-1	Carpeted treads not compatible with the historic style of the building	100	%	Remove carpet and refinish wood tread	Match original wood finish				Install carpet runner or other non-slip tread protector	100	%	
10 Signage	Wayfinding	CP-1	Signage inconsistent	100	%	Replace all wayfinding signage								
14 Conveying	Elevator	SYST-2	Non-compliant or inefficient system	100	%	Remove and replace elevator	Otis Gen2S 2520R traction elevator							
22 Plumbing	Plumbing Fixtures	CP-1	Finishes not compatible with the historic style of the building	100	%	Replace with compatible finishes		See MEP recommendation						
26 Electrical	Interior Lighting	CP-1	Interior fixtures not compatible with historic style of the building		EA	Replace with compatible fixture	Match original units where known	See MEP recommendation						
	Exterior Lighting	CP-1	Exterior fixtures not compatible with the historic style of the building	5	EA	Remove all (5) exterior fixtures and replace (2) ceiling mounted fixtures at east and west entrances	Match original units where known	See site lighting in MEP recommendations for more information						
31-33 Sitework	Paving	LA-2	Asphalt or other cementitious paving is deteriorated, uneven, or negatively sloped		SF	Regrade for positive slope and repave to match existing hardscape	See Civil Engineering recommendations							
	Landscaping	LA-1	Adjacent landscaping is encroaching on building Duff and debris are collecting against building perimeter		LF	Remove duff build up at building perimeter Keep vegetation away from the building foundation and walls Slope grade away from building		Prune large tree limbs encroaching building to restore viewsheds of building						

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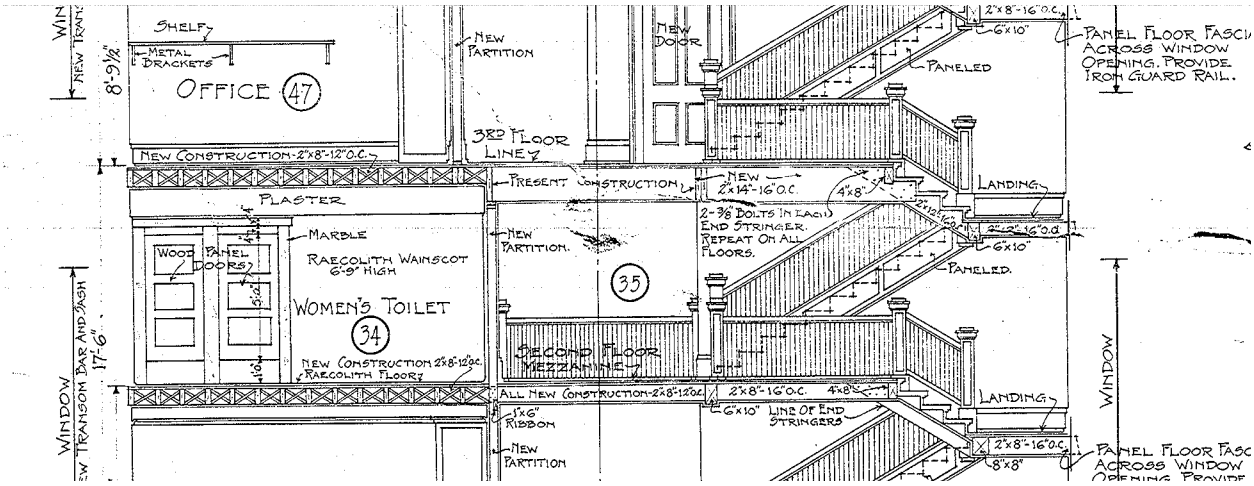

Deady Hall is rectangular in plan and measures approximately 52 feet in the north-south direction and 104 feet in the east-west direction. The building consists of four levels, including a partially below-grade basement level. At the east and west ends of the buildings, there are small unoccupied attic spaces with decorative roof structures that extend vertically above the main roof.

All levels, including the basement, are similar in layout with a corridor that runs east-west through the length of the building, and classrooms on the north and south sides of the building. On the east and west ends of the building, there are stairways that extend from the basement level to the fourth floor. Mezzanine levels were added between the first and second floors and between the second and third floors as part of the 1914 renovation work. Each mezzanine level consists of an east-west running corridor (above the main corridor below) with several small rooms near the east and west stairways.

Original structural drawings for the building were not available for review. Additionally, no destructive/exploratory testing or demolition has been performed as part of this effort. However, based on our experience with similar structures from this era and our site visit, it is highly likely that the structural system consists of wood sheathed floors, solid-sawn wood joists, wood beams, and wood columns at the building interior. At this point, we would assume that the columns and beams form an east-west bearing line along the corridors with the joists spanning north-south from the corridor to the exterior walls. The exterior walls are unreinforced masonry (URM) bearing walls. From our review of past renovation drawings, it appears that the basement floor is a concrete slab-on-grade. It is likely that the foundations consist of conventional concrete spread and strip footings. The 1914 renovation drawings indicate that the mezzanines were constructed of conventional wood joists and floor sheathing.

Existing Conditions

During our site visit, we did not observe any signs of significant distress to the primary building frame. That is, foundation settlement, large cracks in the exterior URM walls, large cracks in the interior partition walls, significant floor deflections/sloping floors, excessive floor vibrations, etc. were not evident during our observations.

The building was constructed before seismic demands were considered as part of the structural design. Additionally, URM buildings have historically performed very poorly in seismic events. Therefore, it is highly likely that the building in its current state would perform poorly in an earthquake and experience significant damage. Significant seismic upgrade work (e.g. adding shear walls, strengthening floor diaphragms, providing connections between the floors and walls, etc.) would be required to bring the building up the Life Safety standards of modern building codes.

Recommendations

This narrative is meant to provide a general outline of the seismic retrofit work that would be required to upgrade Deady Hall to a Life Safety standard. It should be noted that this narrative is preliminary in nature. The scope of work and quantities will be revised as we continue our evaluation of the building. Proposed interventions should take into consideration and limit the level of negative impact to historic character-defining features, walls, and floor plates that will remain. Negative impacts to the exterior, as well as the Big Leaf Maple located directly east of the building, will be avoided. During construction, protection should be provided for windows, stairs, and other historic features that will remain in place. Reference the associated structural sketches for additional information and clarification.

Shear Walls (Sketch Key Notes #1 and #2):

Provide new concrete shear walls in both the north/south and east/west directions of the building from the basement level to the underside of the roof. At the contractor's option, the walls may be cast-in-place or shotcrete, with consideration as to which will be least impactful to the walls, floors, and historic features that will remain. Assume that all new concrete walls will be epoxy doweled into existing walls with #4 bars at 4 feet on center each way. Preference is given to allow existing wood floor joists to remain in place during installation of the shear walls, with shotcrete applied around wrapped joist end, limiting disruption of historic floor plates and the need for shoring.

In the north/south direction, it is anticipated that a new shear wall would be placed along each of the existing stair wells. Each wall will be approximately 20 feet long, 12 inches thick, and contain an average of 15 pounds per square foot (psf) of reinforcing. Historic features located on the existing walls, such as wood trim and chalkboards, will be salvaged and reinstalled.

Since the central hallways do not stack from floor to floor, it is anticipated that the new shear walls in the east/west direction will be located along the exterior URM walls. This offers the dual benefit of providing out-of-plane bracing for the URM walls as well. Each wall will be approximately 64 feet long and perforated to match the existing window openings. Assume the shear walls will be 8 inches thick with 10 psf of reinforcing. Historic window jambs, heads, and sills will be extended to compensate for the increased wall thickness, and existing trim reinstalled.

With the introduction of shear walls, the interior will experience an approximate loss of 590 net square feet.

Foundations (Sketch Key Note #3):

Provide new concrete spread / strip footings at each new shear wall. For the shear walls in the north/south direction (along the stairwells), assume each

footing is approximately 32 feet by 6 feet by 3.5 feet thick with 200 pounds per cubic yard of reinforcing. For the shear walls in the east/west direction (along the exterior URM walls), assume each footing is approximately 70 feet by 4 feet by 3 feet thick with 200 pounds per cubic yard of reinforcing. Assume new foundations will be epoxy doweled into existing foundations/walls.

To the greatest extent possible, new foundations will be designed such that they do not undermine the existing footings. Foundations will be asymmetrical, extending within the building and not reaching beyond the building footprint to avoid further ground disturbance or disruption of the Big Leaf Maple. However, given the unknown conditions and geometry of the existing foundations, we would recommend carrying an allowance for some amount of temporary shoring (e.g. driven steel plates) for the installation of the new foundations.

Diaphragms (Sketch Key Note #4):

Each diaphragm level (First Floor, First Mezzanine, Second Floor, Second Mezzanine, Third Floor, and Roof) will receive new 3/4 inch plywood sheathing throughout. Assume a nailing pattern of 12 inches in the field and 3 inches at panel edges. Assume flat 2x blocking along the plywood panel edges will be required at approximately 50% of the diaphragm perimeter areas. This work will require the removal of existing finish flooring, some of which may have historic finishes beneath, and subflooring. All flooring finishes will be restored or replaced with historically compatible finishes. This work will also require spot excavation of existing soil and straw floor infill at blocking locations, but the soil and straw will be preserved at all other locations.

Collectors (Sketch Key Note #5):

Collectors (drag struts) will be required at the shear walls in the north/south direction (along the stairwells) at each diaphragm level. Assume each collector will be a steel L6 x 6 x 3/4 that is 36 feet long. Provide an allowance for wood blocking on each collector to facilitate connections to the wood floor framing. Negative impact to historic ceilings and features should be limited to the greatest extent possible.

URM Wall to Diaphragm Connections (Sketch Key Note #6):

Provide a positive connection between each diaphragm level (First Floor, First Mezzanine, Second Floor, Second Mezzanine, and Third Floor) and the exterior URM walls. Each connection will consist of an epoxy dowel into the URM wall and a Simpson hold-down. Assume some amount of additional blocking will be required to anchor the hold-down to the existing wood framing. Assume a 3-foot spacing along the perimeter of the building.

Diaphragm Cross Ties (Sketch Key Note #7):

Provide light-gage (16 gage) straps that extend from the exterior URM walls towards the interior of the building and at each diaphragm level. Actual gage may vary pending further analysis. Assume each strap is approximately 18 feet long and that they are spaced at approximately 3 feet on center (to align with the wall to diaphragm connections). Assume some amount of wood blocking will be required where the straps do not align with existing joists.

Secondary Gravity Posts (Sketch Key Note #8):

Provide new steel HSS posts to provide a secondary support where primary girders, beams, or trusses are supported on the URM walls. (Note that these will not be required at areas where new shear walls will be placed.) Each post would extend from the roof down to the foundation. At this time, it is not clear how many locations will require this work because the existing framing is not known in sufficient detail. We would recommend carrying an allowance for (8)

locations. The posts will be concealed in walls where possible. Where exposure is required, posts can be encased or exposed per UO's preference.

Girder to Column Connections (Sketch Key Note #9):

Provide a positive connection between all girder-to-column connections. This work will likely consist of steel plate straps lag screwed into the girders and columns. At this time, it is not clear how many locations will require this work because the existing framing is not known in sufficient detail. We would recommend carrying an allowance for (10) locations per floor.

Mezzanine Bracing (Sketch Key Note #10):

Provide an allowance to brace any remaining mezzanine levels back to the primary structural levels. At this point, it is assumed that the bracing will consist of (4) HSS 6x6 posts at each mezzanine area that extend between the main levels. That is, the First Floor Mezzanine will be braced by posts that extend from the First Floor to the Second Floor, and the Second Floor Mezzanine will be braced by posts that extend from the Second Floor to the Third Floor. The posts will be concealed in walls where possible. Where exposure is required, posts can be encased or exposed per UO's preference.

Roof Structures (Sketch Key Note #11):

Brace the tower roof structures at the east and west ends of the building. Assume a 4-sided steel moment frame system will be provided at each tower. The steel frames will not be visible from the exterior or interior of the building. Each moment frame will consist of 4 HSS columns and 4 HSS beams rigidly welded together. The existing framing that supports the tower structure will also need to be strengthened to resist the loads from the new moment frames. Assume new steel channels will be thru-bolted on the existing beams at 4 locations at each side of the building. This strengthening approach will need to be verified when the existing framing is better understood. Any historic material that will be impacted will be carefully removed and reinstalled.

Non-structural:

Any non-structural elements (e.g. partitions, ceilings, M/E/P systems, etc.) that are modified as part of the renovation work, or installed as new components, will need to be retrofitted and/or installed to conform to current code requirements.

Existing Floor Construction:

It is our understanding that throughout the building, a combination of soil and hay or straw was placed in the joist cavities to act as sound insulation. Where ever possible, disturbance of this material should be avoided. However, it should be anticipated that in areas where new construction occurs in the floor cavity (e.g. where new blocking is installed) the soil will need to be removed to provide access. Areas of soil surrounding these locations will be preserved

Soil Liquefaction:

It should be noted that according to the hazard maps produced by Oregon's Department of Geology and Mineral Industries (DOGAMI), the building site is near an area that has a moderate risk of liquefaction. These hazard maps are very general and do not always accurately predict geological hazards at a specific site. We would recommend consulting with a qualified geotechnical engineer to verify if this is an actual risk for the site as it could have significant impacts on the foundations and building performance.

Enhanced Seismic Performance:

The seismic upgrade work described above is meant to upgrade the building to a life safety standard. Life safety performance is defined as a state where the

building has significant damage but retains a margin against the onset of partial or total collapse. The damage may be so extensive that it is not practical to repair. It may not be possible to re-occupy the building. If the goal of the renovation is to limit damage to the building to better preserve it, a higher level of seismic retrofit would be required.

One option to achieve a higher level of seismic performance would consist of performing a conventional strengthening scheme similar to that described above but with more robust structural elements. Essentially, this would require thicker shear walls with more reinforcing, larger foundations, more frequent anchorage of the exterior walls, etc. It is also possible that an additional shear wall may be required in the north/south direction to reduce the span of the floor diaphragms and limit deflections and associated damage. The thicker walls, and possible addition of an interior wall, would have a significant impact on the interior programming and character-defining spaces and features of the building. This additional upgrade scope will result in less damage to the building and make it much more likely that the building can be repaired and re-occupied. It should be noted that non-structural elements (ceilings, partition walls, etc.) will still likely be damaged because the additional scope primarily addresses the superstructure of the building.

In order to provide the highest level of seismic performance, resulting in the greatest level of preservation of the building after a seismic event, a seismic isolation (also called base isolation) scheme could be considered. An example where this technology has been employed in Oregon is the seismic renovation of the historic Pioneer Courthouse in downtown Portland. In this option, isolation units are placed below the building's bearing walls and columns. We assume that the isolators will be installed below the existing basement level on new foundations so that significant program space is not lost in the basement. The isolator units provide very rigid vertical support to resist gravity loads, but are very flexible in the horizontal direction. This allows the building to be somewhat de-coupled from the ground and greatly reduces the amount of horizontal shaking that can be transmitted from the ground into the building. It should be noted that the building itself still needs to be strengthened (similar to the life safety level shear wall scheme described above) so that the building moves as a rigid unit above the isolation level. We would also expect significantly less non-structural damage in this scheme due to the reduced shaking (acceleration) and displacements in the building. Additional architectural impacts on the site and building are possible through a "moat" that is required around the entire basement (likely around 30 inches wide) such that the entire building can move laterally above the isolators. Due to the additional foundation work, the moat, and the complexity of installing the isolation units under existing elements, this scheme does carry significant additional costs. While not studied in detail as part of this effort, we would expect this type of scheme to carry a premium over the life safety scheme of approximately 50% to 100%.

NET SQUARE FEET

The above proposed structural recommendations result in an approximate loss of 591 net square feet within the building.

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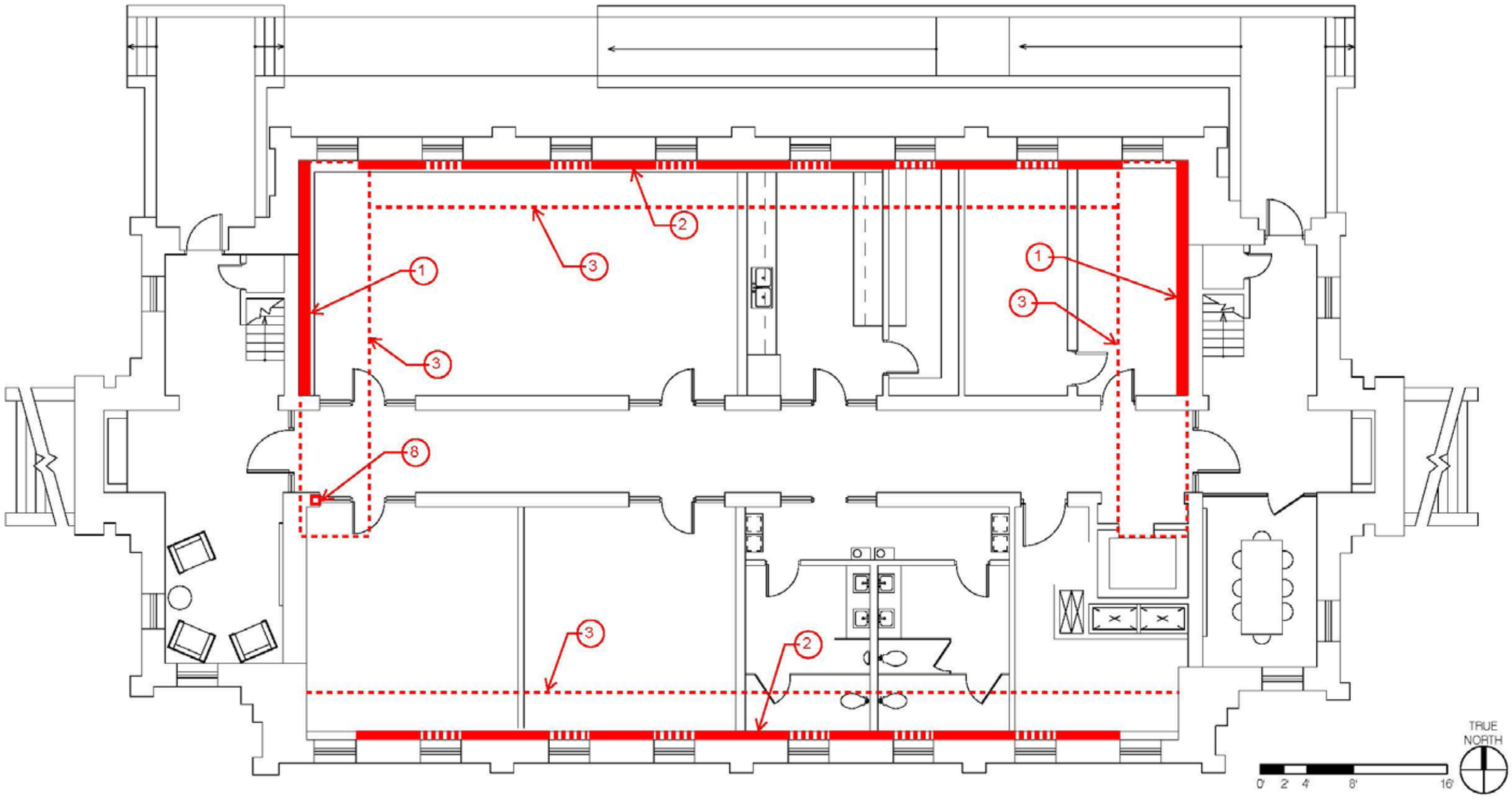
BASEMENT

REFERENCE GENERAL NOTES AND KEY NOTES ON PAGE 7.



Hennebery Eddy Architects kpff

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FLOOR 1

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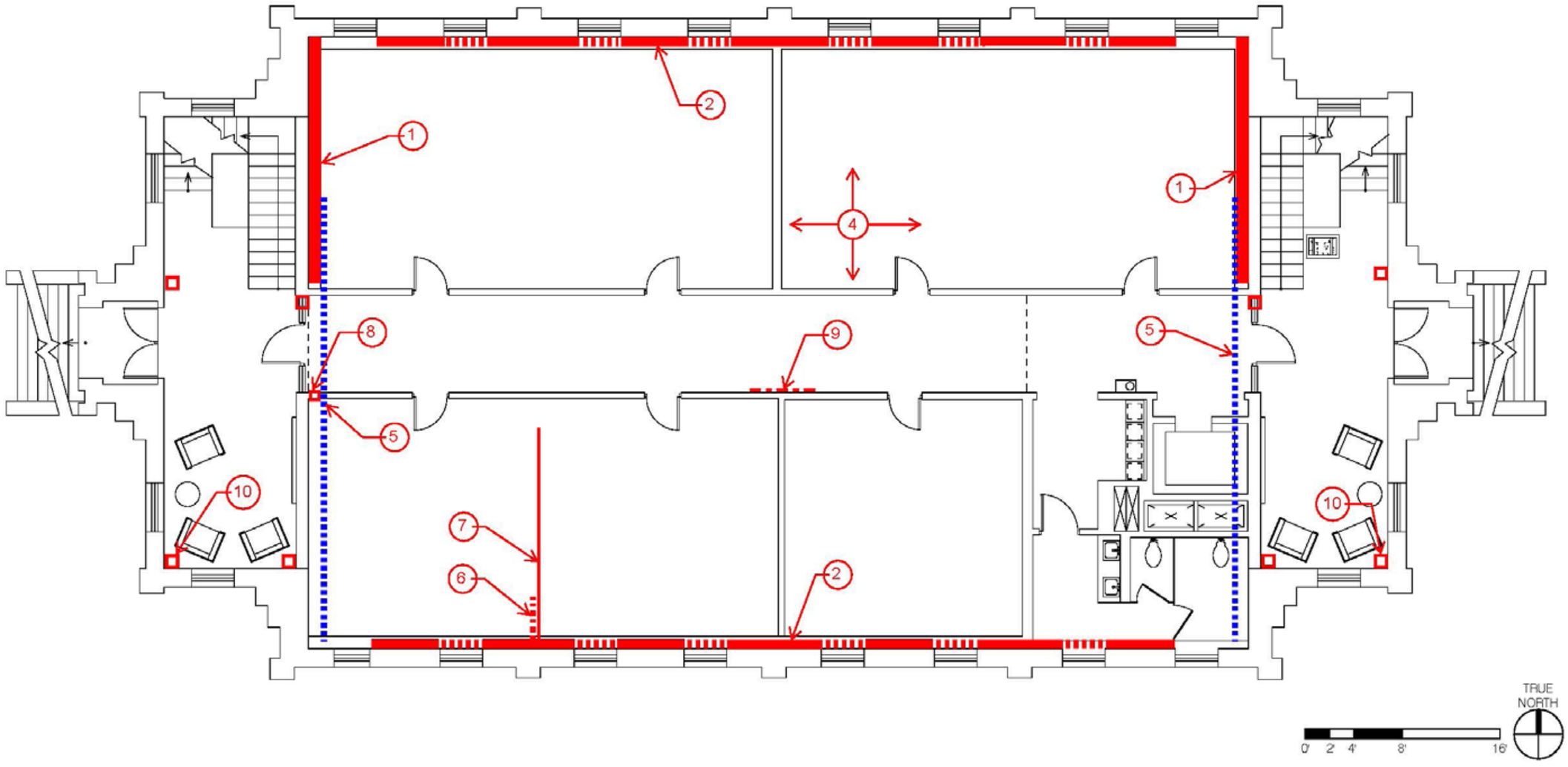

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FLOOR 1 MEZZANINE

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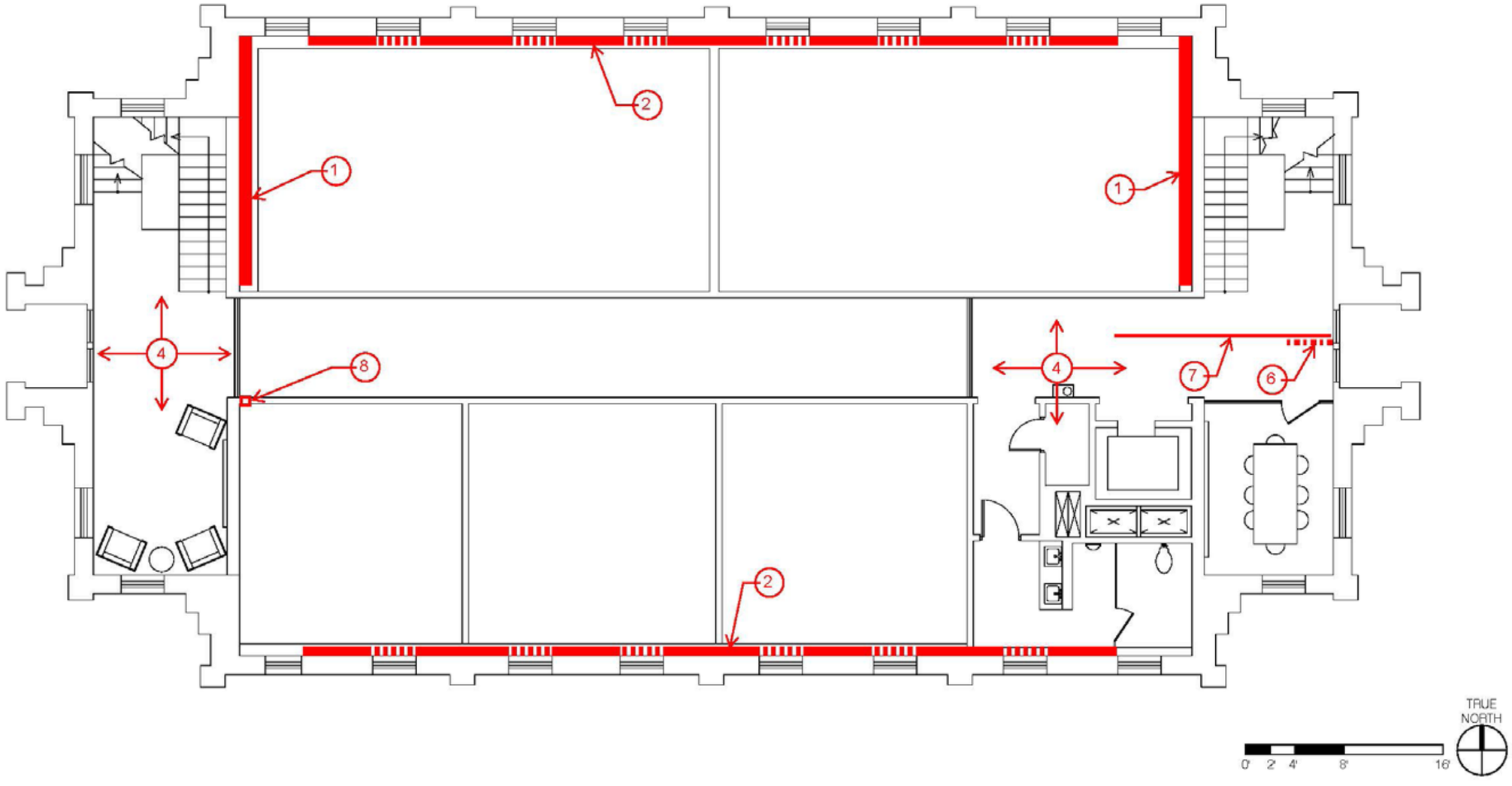

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FLOOR 2

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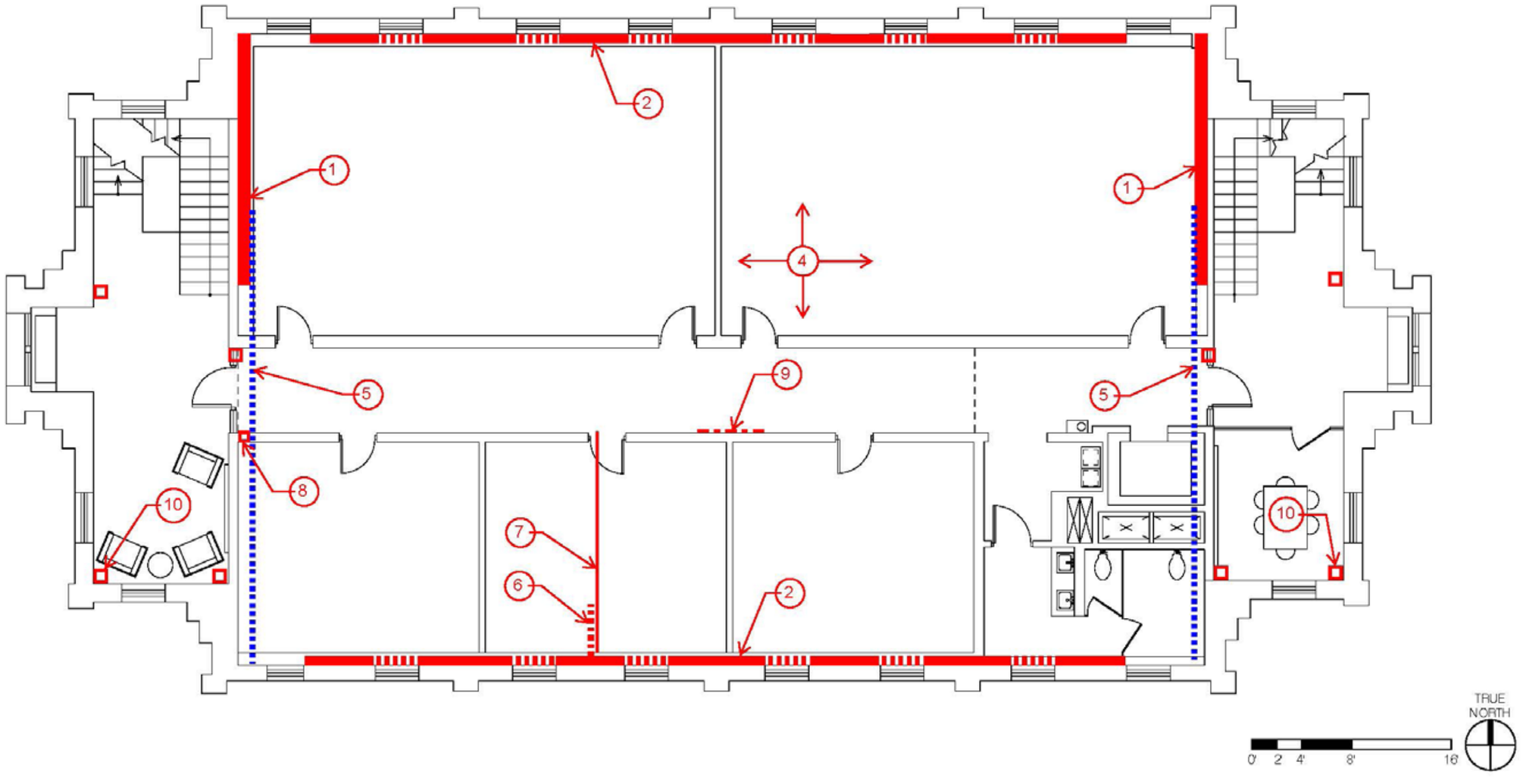

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FLOOR 2 MEZZANINE

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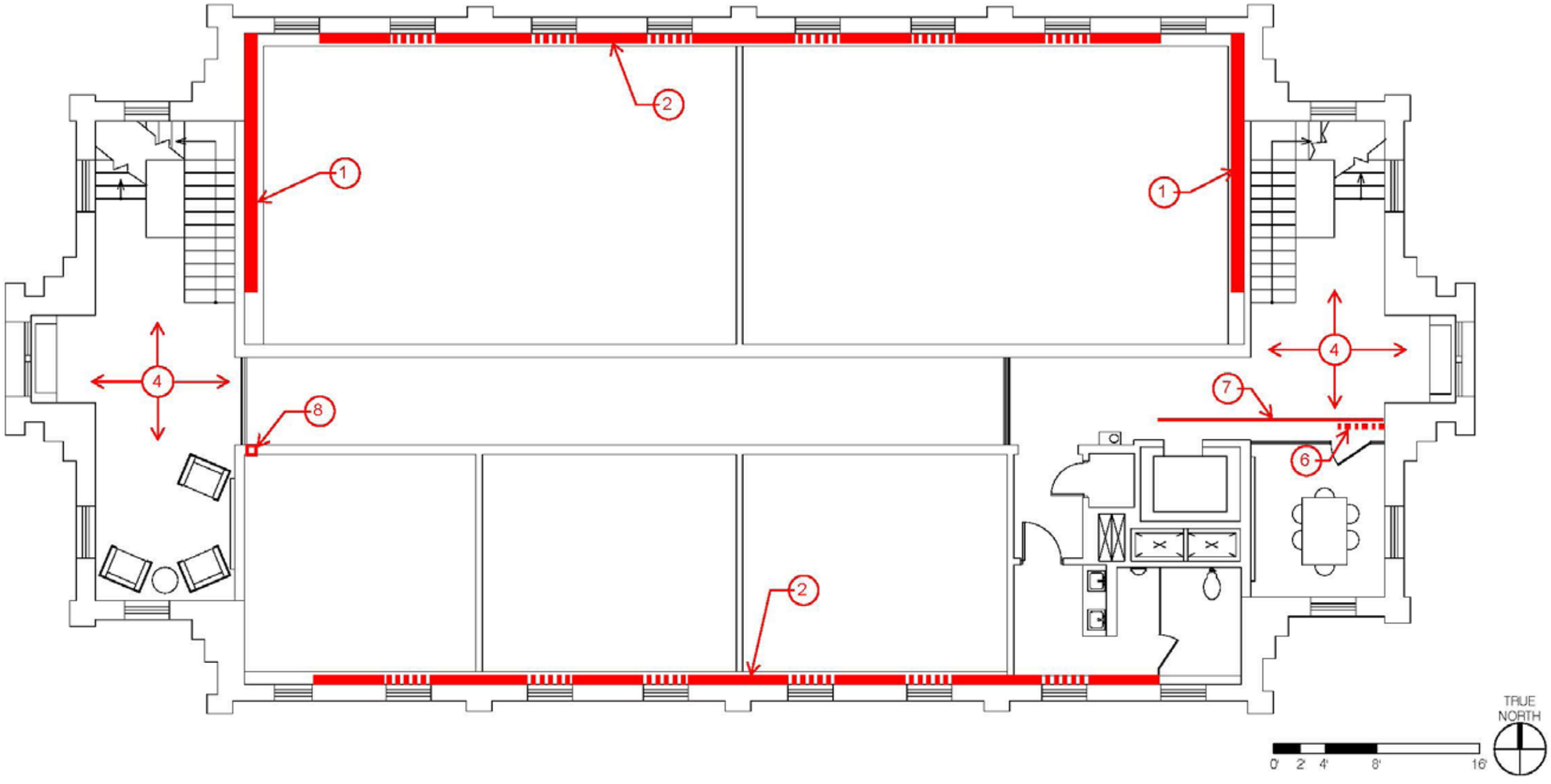

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FLOOR 3

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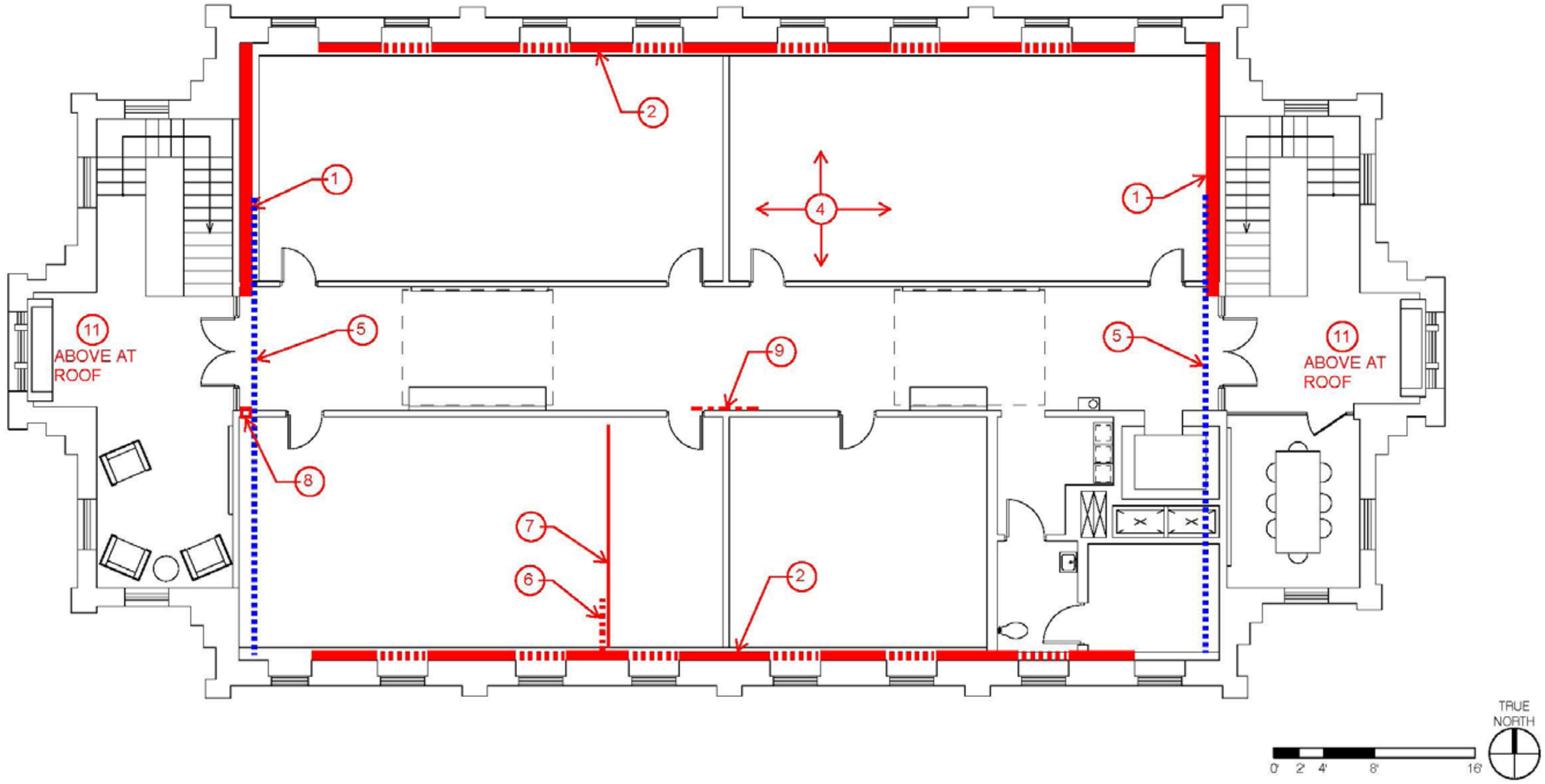

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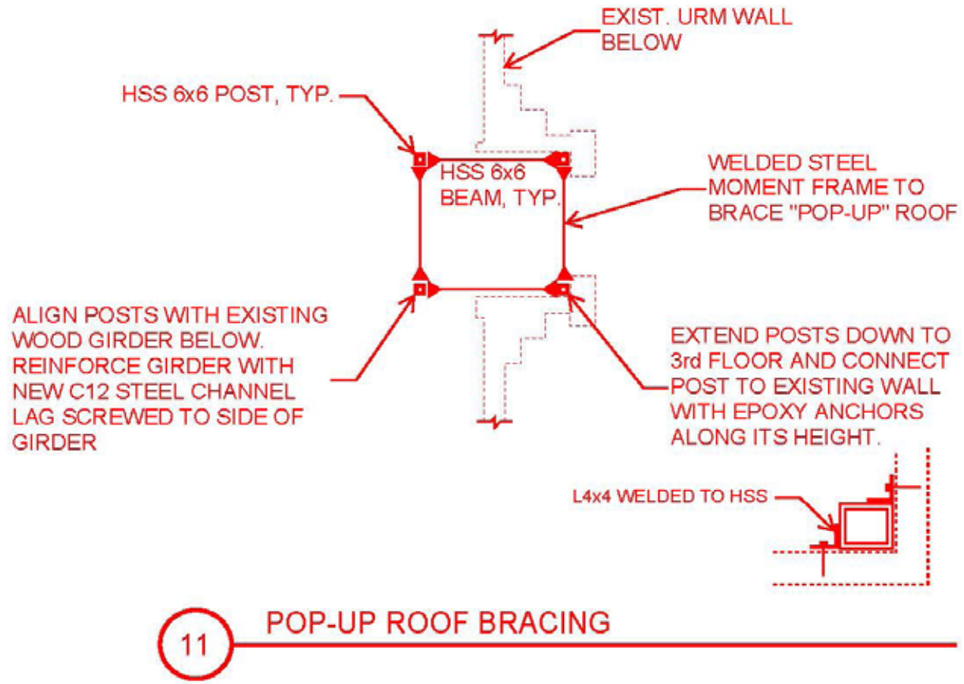
GENERAL NOTES:

REFERENCE THE ASSOCIATED SEISMIC RETROFIT NARRATIVE (DATED OCTOBER 25, 2017) FOR ADDITIONAL INFORMATION ON THE SEISMIC UPGRADE SCOPE IN TERMS OF SIZES AND QUANTITIES.

A SEPARATE ROOF PLAN IS NOT PROVIDED IN THESE SKETCHES. THE SHEAR WALLS, DIAPHRAGM SHEATHING, COLLECTORS, AND GIRDER-TO-COLUMN CONNECTIONS WOULD BE SIMILAR TO THE LOWER FLOORS.

THESE CONCEPTUAL SKETCHES ARE PRELIMINARY IN NATURE. ADEQUATE CONTINGENCIES SHOULD BE PROVIDED TO ACCOUNT FOR UNKNOWN CONDITIONS, CONTRACTOR'S MEANS AND METHODS, REPAIR OF DAMAGED COMPONENTS, REMOVAL AND REPLACEMENT OF FINISHES, ETC.



11 POP-UP ROOF BRACING

KEY NOTES:

1. NEW 12" CONCRETE SHEAR WALL.
2. NEW 8" CONCRETE SHEAR WALL.
3. NEW CONCRETE FOUNDATION.
4. NEW PLYWOOD SHEATHING THROUGHOUT FLOOR.
5. NEW STEEL COLLECTOR (DRAG STRUT).
6. NEW CONNECTION FROM URM WALL TO FLOOR DIAPHRAGM, TYPICAL AROUND PERIMETER.
7. NEW DIAPHRAGM CROSS TIES, TYPICAL AROUND PERIMETER.
8. NEW SECONDARY GRAVITY POSTS.
9. NEW GIRDER TO COLUMN CONNECTION.
10. MEZZANINE BRACING POST.
11. ROOF POP-UP BRACING. REFERENCE SKETCH ON PAGE 7.

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MECHANICAL - HEATING, VENTILATING, AND AIR CONDITIONING

The following analyses and recommendations address the building's mechanical systems, including heating, cooling, ventilation, and controls. Currently the boiler and other mechanical equipment are collocated with electrical and IT systems in a single space at the north side of the basement level with connection to the steam tunnel. All proposed interventions should avoid negatively impacting the building exterior and limit impacts to historic character-defining features and spatial volumes at the interior. Whenever possible ducts, conduit, piping, wiring, etc. should be concealed.

Existing Conditions

The following is a summary of the existing mechanical system and its current condition:

- The building heating system consists of steam radiators located throughout the building, and the 6" steam (20 psi) and 2" condensate return piping mains from the campus system enter from the tunnel at the northeast corner of the building (see photo M1). Steam supply and condensate return piping is routed vertically along the exterior walls to serve the radiators (see photo M2), and the entire system is well beyond the end of its service life and due for replacement (see photo M3).
- Ventilation for the building is provided via operable windows which are anticipated to remain, and bathroom exhaust is provided by ceiling exhaust fans that are due for replacement.

IMAGE M1: 2" condensate return piping mains at the northeast tunnel

IMAGE M2: Typical radiator and cover in classroom.

IMAGE M3: Heating system piping and equipment in disrepair.

- The building currently does not have mechanical cooling.
- The existing pneumatic control system is providing very poor temperature control, is well beyond the end of its service life, and is due for replacement. The intent is to completely replace it with a new DDC system (Siemens) for the entire building that is tied in to the central campus interface.
- The existing condensate return pump unit (see photo M4) can be reused and tied into the new DDC system, but for the purposes of this assessment full replacement has been assumed.
- The existing Cadillac steam meter can also be reused, but for the purposes of this assessment full replacement has been assumed.

Recommendations

The following is a summary of the recommended mechanical systems and options:

The scope includes a full replacement of the mechanical system as follows:

- Provide new steam to hot water heat exchanger (shell & tube) served by existing campus steam main (20 psi) to provide heating water for the building. Two new heating water pumps will primarily serve wall mounted induction units (4-pipe, Dadanco model FMTBY or equal) that provide heating and cooling throughout the building, and heating water piping will be routed up through the building to serve these units. In some entry areas, finned tube radiators will be utilized instead. In a typical classroom, four perimeter induction units (6' long each) are anticipated, and in a typical office, two perimeter induction units (6' long each) are anticipated. The low wall mounted induction units were favored over ceiling mounted chilled beams due to very tall ceiling heights and to help preserve the character defining spatial volumes of Deady.
- Under ventilation air option 3 below (natural ventilation), wall mounted fan coil units (Sonkor model PFWBC-VAR, 4 pipe, with EC fan motor) will be utilized in lieu of the induction units to provide heating and cooling throughout the building. In a typical classroom, two wall mounted fan coil units (6' long each) are anticipated, and in a typical office, one wall mounted fan coil unit (6' long) is anticipated.
- Replace the existing condensate return pump unit with a new unit to serve the new heat exchanger, and tie it into the building DDC system. Connect the new condensate return piping to the existing 2" line serving the building.
- Tie into campus chilled water mains in utility tunnel to provide chilled water for the building, and two new chilled water pumps with chilled water piping will serve the same wall mounted induction units (4-pipe, Dadanco model FMTBY or equal) mentioned above.
- Ceiling fans will be utilized as the first stage of cooling with the existing operable windows.
- The existing pneumatic controls will be demolished, and the building control system will be upgraded to a new DDC system (Siemens) tied into the campus central interface. Each classroom and office will have separate temperature control, and high occupancy spaces like classrooms and conference rooms will also have CO2 sensors for demand control ventilation. Each floor will also have two humidity sensors that will be used to calculate the dew point, so that the chilled water supply temperature is kept high enough to avoid condensation on the induction units.
- Replace the existing Cadillac steam meter, and reconnect it to the campus system.

The following are the ventilation air options:

Option 1: An 8,500 cfm heat recovery ventilator located in a basement mechanical room will provide ventilation air and exhaust for the building, and it will have a heat pipe to recover energy between the two air streams. Four original basement window openings on the south elevation will be used for intake and exhaust louvers, two openings for each one (one window opening is currently a louver). Ventilation supply air and exhaust will be ducted vertically in a shaft up through the building and

distributed horizontally to all spaces. The negative impacts to the historic building character and space requirements may outweigh the benefits of this option. The required mechanical space will be nearly double what is illustrated in proposed plans in the Architectural section of this report. Duct runs will be difficult to conceal throughout the building.

Option 2: An 8,500 cfm air handling unit (AHU) in the basement mechanical room will provide ventilation air for the building, and an exhaust fan located in one of the attic towers will provide exhaust. A run-around heat recovery coil in the AHU and exhaust fan with piping in between the two will provide energy recovery between the two air streams. Two original basement window openings on the south elevation will be used for intake louvers (one window opening is currently a louver), and the exhaust will be discharged in one tower at the existing attic open areas near the roof. This option reduces the negative impact on the historic building, but it still requires the use of one additional basement window for louvers (for a total of two) on the south elevation, illustrated in proposed plans in the Architectural section. The location of the heat recovery coils in the AHU and exhaust fan and the piping in between the two will be challenging. Access to the exhaust fan in the attic tower is also challenging.

Option 3: Only natural ventilation will be provided for the building via the existing operable windows and new exhaust fans to serve bathrooms and custodial areas. This is the least impactful option that maintains the historic method of ventilation, meets the Operable Windows pattern put forth in the Campus Plan, and has little to no impact on the historic character of the interior spaces.

PLUMBING

The following assessment and recommendations address the building's plumbing system including hot/cold water and restroom fixtures. All proposed interventions should avoid negatively impacting the building exterior and limit impacts to historic character-defining features and spatial volumes at the interior. Whenever possible piping should be concealed.

IMAGE P1: The 150-gallon storage hot water storage tank.

IMAGES P2 & P3: A combination of manual and sensor operated faucets and flush valves.

IMAGE P4: Galvanized downspouts pipe runoff from the roof to storm drain line connections.

Existing Conditions

The following is a summary of the existing plumbing system and its current condition:

- The 3” domestic cold water line serving the building enters from the tunnel at the northeast corner, and there are two sanitary sewer connections (4” each), one at the southeast corner and one at the southwest corner of the building. These sewer lines are exposed to ambient air in the areaways and are subject to freezing, so it’s recommended that they be buried or provided with heat tracing for freeze protection.
- The domestic hot water system is served by an existing steam heat exchanger and 150-gallon storage tank (see photo P1).
- The existing plumbing fixtures are a mixture of manual and sensor operated faucets and flush valves (see photos P2 & P3), and the piping materials are a mixture of types too (galvanized and copper). Roof drainage is provided by exterior downspouts piped to storm drain line connections in areaways outside the building (see photo P4).
- The entire plumbing system is well beyond the end of its service life and due for replacement.

Recommendations

The following is a summary of the recommended plumbing system upgrades:

The scope includes a full replacement of the plumbing system as follows:

- Replace the existing the existing domestic hot water steam heat exchanger with a tank type electric water heater and hot water recirculation pump.
- The 3” domestic cold-water line serving the building enters from the tunnel at the northeast corner, and there are two sanitary sewer connections (4” each), one at the southeast corner and one at the southwest corner of the building. These sewer lines are exposed to ambient air in the areaways and are subject to freezing, so it’s recommended that they be buried or provided with heat tracing for freeze protection.
- The domestic water system will be fed from a new service to the building that ties into the existing 3” main, and this will include a meter, backflow prevention and pressure regulation devices as necessary.
- The domestic water piping will be copper with brazed joints below grade and soldered joints above grade.

IMAGE FP1: Typical 4” fire sprinkler water line.

IMAGE FP2: Exterior fire department connection along the north elevation.

- The sanitary waste & storm drainage systems will be a new service within the building. The waste and vent piping system will be no-hub cast iron with heavy duty couplings below grade and no-hub cast iron with standard duty couplings above grade.
- The plumbing fixtures will be ADA compliant as appropriate for the designated locations.
- The plumbing fixtures will be of a high-level finish that is historically compatible as well as water conserving within the parameters of governing code & UO standards.
- A condensate drain will be provided at the heat recovery ventilator located in the basement, and make-up water with code approved backflow prevention devices will be provided for the heating water system.
- The elevator will be provided with sump pump and alarm system in the elevator pit.

FIRE PROTECTION

Existing fire protection includes partial sprinklering, The following address improvements to the fire sprinkler system. All proposed interventions should avoid negatively impacting the building exterior and limit impacts to historic character-defining features and spatial volumes at the interior. Whenever possible conduit, piping, wiring, etc. should be concealed.

Existing Conditions

The following is a summary of the existing fire sprinkler system and its current condition:

- The 4" fire sprinkler water line (85 psi) serving the building enters the building from the tunnel at the northeast corner, and the building is sprinklered along the egress paths, but not in the classrooms or offices (see photo FP1).
- The existing check valves are due to be replaced by a new double detector check valve assembly.
- A 4" fire protection line from the mechanical room exits the building and routes to a fire department connection on the north side (see photo FP2).
- The entire fire sprinkler system is beyond the end of its service life and due for replacement.

IMAGE E1: The electrical system switchboard in the basement mechanical room.

IMAGE E2: Power source terminal cabinet in the basement mechanical room.

IMAGE E3: Campus fiber optics rack in boiler room.

Recommendations

The following is a summary of the recommended fire protection system:

- Provide complete replacement of existing sprinkler system with a new system per NFPA 13 that covers the entire building and ties into the existing 4" fire main in the basement mechanical room.
- For the classrooms and offices, sprinkler mains will be routed in furred out areas along the exterior wall and above corridor ceilings to allow for sidewall heads that provide coverage from both directions.
- Replace the existing check valves with a new double detector check valve assembly.
- Provide zone control valves for each floor located in the basement.
- Relocate existing fire department connection to improve aesthetics, pending local fire marshal approval.
- Provide Class 1 manual standpipe per NFPA 14.

ELECTRICAL, LIGHTING & TECHNOLOGY

The following analyses and recommendations address the building's electrical and IT systems, lighting, and fire and life-safety systems. Currently the electrical and IT systems are collocated with the boiler and other mechanical equipment in a single space at the north side of the basement level with connection to the steam tunnel. All proposed interventions should avoid negatively impacting the building exterior and limit impacts to historic character-defining features and spatial volumes at the interior. Whenever possible conduit, wiring, etc. should be concealed.

Existing Conditions

The following is a summary of the existing electrical system and its current condition:

- The electrical system consists of a 600-amp, 208Y/120-volt switchboard, installed in the early 1990s, with main circuit breaker, located in the

IMAGE E4: Servers and Cat 5e cabling chase space next to elevator in basement.

IMAGE E5: Fire alarm control panel.

IMAGE E6: Flush-mount telephone cabinets.

boiler room at the entrance to the steam tunnel. The switchboard (photo E1) backfeeds five existing panelboards (five 100-amp each and one 60-amp for the 'emergency' panel) and the elevator (150-amp). Power is sourced from a 500kVA oil-filled transformer located at Villard Hall next door, which routes through a terminal cabinet (photo E2) next to the switchboard by way of direct buried conduits outside of the steam tunnel.

- Campus fiber optic routes from the steam tunnel in inner duct (photo E13) to a wall-mounted rack in the boiler room (photo E3); this rack in turn serves several nearby buildings including Villard Hall. The servers and Cat 5e cabling that serves the telecom outlets in Deady Hall originate in a chase space next to the elevator, across the basement hall from the boiler room (photo E4). The telecom cabling is turn routed through the existing flush-mount telephone cabinets (photo E6), and then through exposed conduits and raceway to the outlets.
- The fire alarm control panel (photo E5) is located at the east stairwell by the front entrance to the building. The panel is an addressable panel, Notifier NFS-320. Devices in the building have been upgraded to ADA compliant strobes and horn/strobes. Smoke detectors are used in the hallways, and pull stations are single-action devices.
- Outdoor lighting has been retrofitted with surface raceway and boxes at the various outdoor entrances (photo E7). Lenses for these luminaires is yellowed due to UV exposure, and the luminaires are either compact fluorescent or HID-source, and are controlled by time clock in the boiler room.
- There is one wall-mounted shop light (photo E11) located on the second floor level of the north face of the building. Area lighting for the parking area north of Deady Hall could be accomplished by pole or building mounted lighting on the north side of the parking area at Villard Hall.
- Classrooms typically use two rows of suspended fluorescent (T8-lamp, 2 lamps per 4-foot section) luminaires, where the front and back of the classroom are switched separately (photo E8). Classrooms have been retrofitted with two wall-mounted dual-technology occupancy sensors. They have been outfitted with ceiling mounted projectors and two speakers for audio reinforcement at the front of the

IMAGE E7: Outdoor lighting with surface raceway and boxes.

IMAGE E8: Typical fluorescent luminaires in classrooms.`

IMAGE E9: Surface conduit supplies power, data, and wifi outlets.`

IMAGE E10: Projectors and speakers mounted at the front of rooms, typical at all classrooms.

room (photo E10), as well as an AV cabinet by the front of the room next to the hallway wall. Power and data outlets, including WIFI, have been added with surface raceway and/or conduit (photo E9).

- Corridor lighting is a mix of surface mounted fluorescent lighting, recessed compact fluorescent downlighting, and in some areas 'schoolhouse' style lighting (pendant or surface mounted) with compact fluorescent lamps. Controls appear to be by time clock and/or circuit breaker (photo E12).
- Emergency power is limited to a local battery backup for security in the boiler room, and emergency lighting units in the elevator lobbies. Lack of emergency units and associated test switches indicates that code-required emergency lighting needs to be added to the hallways and stairs in all locations outside of the elevator lobbies.
- Panelboards are manufactured by Cutler-Hammer, but date back to the 1950s. Breakers in the panelboards are old enough that they are well beyond the recommended rated life of 20 years (IEEE Gold Book for Design of Reliable Industrial and Commercial Power Systems), and so cannot be relied upon to safely clear a short circuit or overload to prevent an electrical fire. All should be replaced.
- Routing for telecom by means of the original telephone cabinets is very congested, making it difficult to add cables for new outlets, or replace cabling. New chases for telecom should be identified. The building is small enough that one IT space located on the lowest level can reach all outlets as long as chases are located to minimize cable lengths.
- Fire alarm system is code compliant, and new devices can be added to the existing system. The main panel should be relocated to the main IT room, and replaced with a smaller annunciator in the main lobby.
- Existing electrical sub-meters need one-for-one replacement, including the current transformers (CTs) to bring them up to current UO standards for their campus metering network.

IMAGE E11: Wall-mounted shop light at the north exterior elevation, second floor.

IMAGE E12: A mix of "schoolhouse" style pendant lights and recessed downlighting in a typical corridor.

IMAGE E12: Campus fiber optics route into the building from the steam tunnel at the northeast corner at basement level.

- Elevator replacement will necessitate an ADA-based emergency communicator panel at each elevator lobby, and the main entrance.

Recommendations

The following is a summary of recommended actions for the electrical systems of the building:

- Create a new main electrical/IT room in the space adjacent to existing boiler room. This will greatly reduce installation cost by minimizing the length of cable extension for intercepted power feeders and fiber optic for data from the boiler room. This would also maximize the space available to mechanical for replacement equipment in the boiler room.

- Given the constricted space in the boiler room, we recommend that fiber optic be extended from the steam tunnel to the new main electrical/IT room via EMT conduit, rather than in an inner duct.

- Provide new 208Y/120-volt switchboard, 600-amp with solid-state main circuit breaker with LSI-trip settings, and refeed existing panelboards (one 225-amp panel for mechanical, five 100-amp for panels, one for new basement air handling unit, one 150-amp for the elevator). Provide integral surge suppressor protection device. Reconnect electrical service to medium voltage transformer by Villard Hall via existing conduits. When steam tunnel is rebuilt in this area, incoming power and telecom conduits will route directly to new elec/IT room.

- Provide new power connections for new plumbing and HVAC equipment as listed in above narratives. New air handling unit to tie direct to main service, while boiler room bumps connect to panelboard dedicated to basement mechanical loads. Where applicable, room induction units will tie to 120-volt, 20-amp circuits dedicated for HVAC and not shared with convenience outlets.

- Replace existing electrical sub-meters, including the current transformers (CTs), to bring them up to current UO standards for their campus metering network.

- Replace existing panelboards one-for-one with new 125-amp panels, 22kAIC rated, (42) 20-amp, 1-pole breakers each, including upstream feeders and downstream branch circuits.

- Replace existing outdoor lighting at building entrances with LED-based luminaires with IESNA full cutoff at building entrances. Provide new lighting relay panel in main elec/IT room for control of outdoor lighting and indoor corridor and stairwell lighting, following UO standards.

- Remove wall mounted shop lights on north face of building; this luminaire is used to illuminate the parking area to the north of Deady Hall. Replace with three campus-standard pedestrian scale pole lights for illuminating the parking area; lights to be connected to Deady Hall lighting relay panel.

- Replace classroom lighting with historic (customized) style LED pendants that can be locally dimmed in relation to available daylight. Provide digital controls to allow both manual switching and dimming of lighting (front of room switched separate from back of room). Provide two wall-mounted dual-technology occupancy sensors.

- Replace corridor lighting with surface-mounted historic (customized) style LED lighting, or linear LED lighting sources, depending on ceiling height. Use ceiling dual-tech occupancy sensors, or else integral occupancy sensors in luminaires,

for auto-switching in corridors and stairwells. Provide daylighting control in stairwells above first floor level.

- Add emergency lighting in form of recessed unit equipment that flips down and illuminates when utility power is lost, similar to unit equipment added recently in Chapman Hall.

- Assuming the corridor ceilings will be raised with removal of mezzanine hallways, provide new wire basket tray either (a) recessed above new suspended corridor ceiling or (b) located in soffit area to one of corridor. Provide new vertical chases for new telecom wiring; the building is small enough that one IT space located on the lowest level can reach all outlets so long as chases are located to minimize cable lengths.

- Provide completely new Cat 5e telecom cabling from main IT room to data outlet locations throughout building, including for WiFi, following UO standards for Division 27. Coverage in include data, phone, BAS, security cameras, and private network panels. Replace campus backbone cabling for fiber optic and copper from tunnel system to new MDF room. Route three 4-inch EMT conduits directly from steam tunnel into new Elec/IT room for campus fiber optic

- Provide new racks, wire management, ladder tray and patch panels in MDF room. Provide new power outlets, telecom outlets, and AV outlets for video and sound reinforcement in all spaces throughout the building. Pathway to include 1-inch conduit from data outlets to nearest wire basket tray, corridor wire basket tray (24”x4” for length of corridor per floor), and vertical chases (typically three 4-inch conduits per floor) from each floor back to the MDF room.

- Provide new security system, locating head end panel in new electrical / IT room, and replacing all existing devices –door contacts, keypads, and card readers at building entrances. Provide network security camera system, providing coverage for all entrances, per UO Standards.

- In classrooms and offices, provide historically compatible ceiling fans (up to 20-watts each) with one wall controller for all fans within a given room. Wall control located by light switches to adjust fan speed.

- Fire alarm system will be replaced with new addressable main panel and new initiating devices and notification appliances. The main panel will be installed in the main IT room with a smaller annunciator in one of the main stair lobbies.

- Elevator replacement will necessitate an ADA-based emergency communicator panel at each elevator lobby and the main entrance, as well as power and signal for the elevator controller closet as required by the Oregon Elevator Code.

- Provide emergency (blue) phones as required by Public Safety.

- See Heating, Ventilation, and Air Conditioning section for approximate net square feet lost for all proposed MEP options.

NET SQUARE FEET

The above proposed MEP recommendations result in a combined net square foot loss in the following quantities:

HVAC Option 1: 1,110 SF

HVAC Option 2: 672 SF

HVAC Option 3: 501 SF

Following the major interior alterations in the 20th century, remaining historic materials and small scale features are minimal. However many spatial qualities and some classroom and office locations dating back to both 1876 and 1914 remain intact. This section provides an assessment of the interior program and finishes with recommendations for an interior rehabilitation that combines features from both historic periods.

VERTICAL TRANSPORTATION

As constructed in 1876, vertical transportation was limited to four narrow winding stairs at each corner of Deady Hall leading from the unfinished basement up to the third floor.

In 1902, the basement of Deady Hall was finished for classroom and office use. Restrooms were installed at the southeast and southwest corners, eliminating the stairs on this level in these locations. The remaining stairs at the northeast and northwest corners were renovated to a more decorative appearance, with curved wood balustrades at the lower landings.

Image 40: Railing details from the 1902 basement level stairs include turned balusters, curved handrails, and spherical finials at newel posts.

Image 41: Railing details from the 1914 stairs are more geometric, with square balusters and newel posts.

The original wood stairs in all four corners remained at the upper levels until a major interior renovation in 1914. This renovation eliminated the southeast and southwest stairs entirely and reconfigured the northeast and northwest stairs to provide access to two new mezzanine levels. The basement portion of these stairs were not reconfigured.

The stairs at northeast and northwest corners remain to this day, and thus are not original but date back to 1902 at the basement level and 1914 at all upper levels.

In an effort to meet accessibility standards in 1988, an elevator was introduced near the southeast corner of the building. An exterior ramp was also installed to provide an ADA entrance from ground level at the exterior down to the basement.

Existing Conditions

The remaining stairs are in good condition. Wood balusters and railings are treated with both stain and paint. This finish is worn at all levels. Corner posts are worn at edges but in stable condition. The wood treads and landings are currently treated with carpeting and metal strip nosing. The condition of the wood finish below is unknown.

The existing elevator is outdated, inefficient, and in need of modernization. The machine room required for its operation occupies valuable square footage within the building. The current orientation and entry location, in a secondary hallway off the main corridor, are also not conducive to restoring the original configuration of Deady Hall's interior and provide an unbalanced means of transportation for accessibility standards.

Recommendations

Replace the existing elevator with an Otis Gen2S 2520R traction elevator and relocate according to proposed interior plans for better circulation. This

Image 42: Uninviting secondary corridors lead to the elevator entrances at all floors.

Image 43: Exterior view of the 1988 ADA ramp from the northwest corner of the project site.

Image 44: Typical conditions of the interior stairs dating to 1914. Treads are carpeted with metal nosing and handrails are painted wood and worn.

elevator does not require a machine room. See Program section for interior recommendations.

Restore the existing wood stairs. Remove all carpeting and metal nosing. Prepare and refinish all wood surfaces including landings, balusters, paneling, stringers, treads, and risers. Match original wood finish where known. Install a carpet runner or other non-slip surface to protect treads.

ACCESSIBILITY

In 1988, when the Americans with Disabilities Act (ADA) was first introduced in congress, improvements were made at Deady Hall to meet new standards for making public buildings accessible for all. The 1988 renovation project included the installation of an elevator and an exterior access ramp along the north elevation leading down to a basement level entrance. This ramp leads from the adjacent sidewalk and parking area down to the basement using a total run of 48'-10" at a 2% slope with the required landings and widths. It is made of concrete with lighting and landscaping integrated in the adjacent concrete retaining walls. The elevator is located at the southeast corner of the building, at the opposite end from the ADA entrance at the northwest corner.

Existing Conditions

All existing features of Deady Hall were evaluated based upon the Institute for Human Centered Design's 2016 ADA Checklist for Existing Facilities. Following the 1988 renovations to improve accessibility at Deady Hall, minimum requirements for circulation, clearances, and signage are largely in compliance with a few exceptions. For the items that are in compliance, there are some deficiencies. While the elevator meets ADA standards, it is outdated and poorly located within the building. The exterior ramp is in sound condition, with some cracking at the concrete paving and retaining walls.

Image 45: Detail of the ADA entrance at the northwest corner of the building. This basement entrance is accessed by both stairs and a compliant ramp.

Image 46: Looking east up the concrete ADA ramp at the north elevation from the basement level landing.

The following items were not in ADA compliance:

- The primary entrances at the east and west elevations are not ADA accessible.
- Exterior signage to direct people to the ADA entrance at the north elevation is missing.
- Door handles to classrooms and offices vary between knobs and levers. Knobs are not in compliance.
- Grab bar locations in water closets are not at the appropriate heights.
- An adequate number of wheelchair spaces is not provided within each classroom where seating is fixed.

Recommendations

Although the primary entrances at the east and west elevations are not ADA accessible, providing an alternate ADA entrance along the north elevation is in compliance so long as this route provides a similar entrance experience that leads to the main entrance lobbies. Currently, the north elevation ADA ramp meets this allowed exception. Once inside the building, however, the route from the basement to the upper floors involves traversing the building to the opposite corner to access the elevator. To improve this condition, a minimum recommendation is to rehabilitate the basement entrance and corridors to serve as primary spaces and implement the Welcoming to All campus plan pattern. Alternately, the exterior ADA ramp should be relocated from the western basement entrance to the eastern basement entrance to bring the accessible entrance to the same side as the elevator. See Proposed Base Interior Diagrams at the end of this section. All exterior alterations to the ADA ramp should be coordinated with adjacent site improvements at Villard Hall to improve UO Campus Plan open spaces initiative while also restoring this tract of land included in the Landmark Designation for pedestrian use.

Image 47: Example of a typical knob-style interior door handle. Metal finishes vary.

Image 48: Example of a typical lever-style door interior door handle. Metal finishes vary.

Image 49: The unwelcoming basement corridor, which serves as a primary corridor for those entering the building from the ADA entrance at the northwest corner.

Additional recommendations include locating ADA wayfinding signage at the exterior of the building. Door handles should be replaced with ADA compliant levers that are also period-appropriate. See Finishes section for hardware recommendations. While grab bar locations in water closets are not at the appropriate heights, new restroom locations are proposed in the following Program section that will meet all ADA requirements. Lastly, room should be made in existing classrooms with fixed seating for more wheelchairs spaces (2-3 per classroom, minimum). Classroom spaces proposed in the following Program section account for this wheelchair requirement. See Diagrams at the end of this section for proposed classroom layout options. It is assumed in these diagrams that all tablet arm chairs are mobile.

PROGRAM

The interior of Deady Hall has been significantly modified over the decades by various educational departments. Originally constructed as the first campus building, it housed all University functions including multi-use classrooms for both academic and preparatory students, and offices for faculty. Upon initial construction, the basement was unfinished, and only the upper three primary floors were utilized. The first floor housed two classrooms along the south elevation and four offices along the north, with a central corridor running east/west. The second floor was evenly divided into four classrooms with no corridors. The third floor was open in plan and functioned as both a chapel and assembly space, where commencement ceremonies were held. (See original program diagrams from 1876 in Appendix.) All three upper floors had tall ceilings averaging 16 feet in height. As originally constructed, the building was composed of expansive rooms and was primarily used for classrooms, with 71% of the usable area allocated to classroom spaces and only 12% to offices.

Image 50: A typical mezzanine level office with low ceiling height and exterior window cut in half from the mezzanine floor.

Image 51: Historic image of a Deady Hall office, date unknown. Ceilings were full-height and coved.

Image 52: A typical classroom with full-height windows and ceilings and overcrowded seating.

In 1902, the basement was finished, providing additional classroom and office space.

By 1914, additional buildings had been added to the University of Oregon's campus, allowing for Deady Hall to become more specialized. Deady Hall underwent an interior renovation to add mezzanine levels between the first, second, and third floors. This subdivided the classroom and office spaces, cutting many of the floor to ceiling heights in half. A central corridor was introduced at the second and third floors, and the third floor was divided into six classrooms, eliminating the formerly open assembly space.

Primarily occupied by the science department, the new mezzanine levels provided access to additional storage rooms and observation balconies that overlooked laboratory classrooms below. Offices took over the space gained from eliminating the southeast and southwest stairs. The total usable square footage grew by nearly 75% with the additional mezzanines and basement use. Space dedicated to offices remained consistent at around 13% of the usable space, and the percent of usable space allocated to classrooms dropped to 57%. This reflects an increase in support spaces and circulation. (See 1914 program diagrams in Appendix.)

In 1952, an interior renovation eliminated the balconies created by the mezzanines and infilled openings and glazing along all corridors, greatly reducing transparency. This was the most recent undertaking that altered the once-open interiors of Deady Hall – with its full-height spaces and daylit corridors – to its compartmentalized configuration with low ceiling heights and solid partition walls and doors that is prevalent today.

In 2017, the building is no longer used by the sciences and is now predominantly used by the math department. The basement is occupied by offices,

Image 53: A typical restroom adjacent to the interior stairs at the southeast or southwest corner of the building, No ADA stalls exist at these locations.

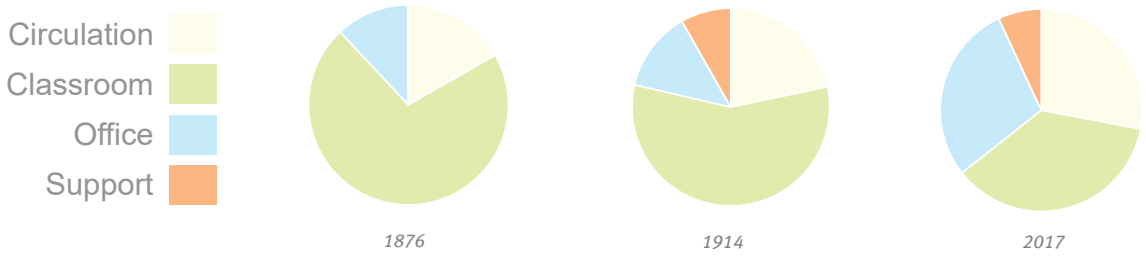
Image 54: Looking west into the first floor mezzanine level from the east stair. The primary corridor is locked and used for storage.

Image 55: An example of a pocket kitchenette at a corridor on the first floor.

and all upper levels are divided between classrooms and offices. The first-floor mezzanine no longer provides access to the former balconies it was initially constructed for, and is now enclosed and used as storage space. The second-floor mezzanine is now a full-length corridor that provides access to offices. Currently, 36% of the usable building area is dedicated to classrooms, 28% to offices, and the remainder is a combination of support and circulation. (See current 2017 program diagrams in Appendix.)

The pie charts below summarize the evolution of program use within Deady Hall from it's date of construction to today. Originally, the building was primarily used for classrooms. Over time, more offices and additional support spaces have been added, further subdividing the spaces. Today, the program is an even mix of support/circulation, office, and classroom.

PROGRAM EVOLUTION



Existing Conditions

The interior of Deady Hall no longer reflects the grandeur spaces implied by the Italianate style exterior. As the program and interior spaces are currently arranged, the use of Deady Hall is inefficient, underutilized, cramped, and unwelcoming. Supplemental corridors, particularly at the basement and mezzanine levels, consume valuable square footage that could be dedicated to usable space or reopened to contribute back to the once-open feeling on the interior. Underutilized closets and corridors have been transformed into pocket kitchenettes. Classrooms and offices have been divided and further subdivided – both in height and area – eliminating the larger interior spaces that once existed at the turn of the nineteenth century. Mezzanine levels are enclosed and no longer function as initially designed. Interior windows at the corridors of each mezzanine level and transoms above classroom entrances have been removed hindering natural lighting. .

The number of occupants currently assigned to the interior spaces exceeds the recommended use based upon both building code standards and campus planning goals. See Program Comparison chart on page 88. Current classroom configurations and office proportions provide seating for a recommended total of 453 people. Actual assigned bodies based taken from a building use chart provided by the University is 558, the difference in part due to overcrowded classrooms.

Recommendations

While an evolution of University of Oregon spatial needs has dictated the current interior layout of Deady Hall over time, it is highly recommended to prioritize the historic significance of the University's first campus building and restore not only the historic physical features but also the interior volumes as close as possible to the period of significance between 1876-1914. Assigned persons within the building should also be reduced to meet current occupancy and campus planning standards.

In general, it is recommended to expand the interior volumes where possible, focusing on entrances, corridors, and compartmentalized rooms. This is achievable by eliminating unnecessary corridors, removing sections of mezzanine level floors to restore full-height spaces, reopening stair corridors and entrance vestibules, and removing select interior partitions. Reintroducing corridor windows and transoms is recommended to bring natural light deeper into the building (refer to the 1914 drawing set for details on window proportions and locations).

One base scheme has been developed that preserves the best remaining features of the two historic periods (1876 and 1914) while seeking to address current code requirements, campus standards, and expectations. An alternative scheme is provided for the third floor taking into consideration its historic open assembly use.

All proposed interior schemes may require alterations pending further code and occupancy review.

Character-Defining Features

Following the major alterations executed in 1914, a pure restoration of the interior configuration of Deady Hall as constructed in 1876 is infeasible and unpractical for current use. While not original, the addition of mezzanine levels and the resulting interior spaces from the 1914 renovation are historic in their own right, and in fact much of the remaining physical features at the interior date from this era. As a result, a rehabilitation that returns the interior program to a combination of 1876 and 1914 spaces is recommended.

Extant historic features from both 1876 and 1914 are identified in Character-Defining Features diagrams in section 1.02 of this assessment. These include not only physical elements such as walls and stairs, but also identify consistent use of spaces over time. These features and spaces should be prioritized for all future restoration proposals and serve as a baseline for the following proposed interior options.

Image 56: Existing stair landings are enclosed by the use of offices, identified by the green wall in this image.

Image 57: A low ceiling height creates an unwelcoming first floor corridor, looking west from the east entrance lobby.

Image 58: The third floor stair landing is enclosed by an office (identified by the blue wall) and a restroom (door pictured left). The full-height windows within these spaces no longer provide natural light to the stairs.

Mezzanines

The original mezzanine corridors did not fully extend to connect either side of the building, but were constructed to provide access to balconies which are no longer extant. The mezzanine levels, which align with the historic 1914 stair landings, still function to provide access to valuable square footage at the southeast and southwest corners. It is recommended for all future rehabilitation options to remove the full-length mezzanine corridors while retaining the landings and keeping their adjacent spaces accessible where possible. Restoring the corridor windows at these repoened levels will greatly improve natural light and wayfinding. Retention of the east and west end mezzanines is also paramount to reducing seismic upgrade impacts to the 1914 stairs and east and west exterior walls. These portions of the mezzanines can be used to connect the exterior URM walls to the floors and break up the height of the masonry to an acceptable dimension (see Structural narrative for further discussion).

Complete removal of the mezzanines was explored. However, this would result in removing elevator access to the landings and adjacent east end spaces, rendering these floors and landings unusable per accessibility standards and eliminating necessary water closets and valuable square footage. Increasing the floor to floor heights at the east and west ends would also result in a seismic retrofit strategy relying on strong-backing or shear walls that would more heavily impact the spaces with the most intact historic fabric. Ultimately, full removal of the mezzanine floors was not pursued as a viable scheme due to the limited value when compared to the increase in negative impacts.

Likewise, retention of the full mezzanine levels was explored. Because a majority of the spaces historically accessed by the mezzanine have long been removed, retaining the mezzanines over the corridors perpetuates the existing dark, low circulation without adding any real value unless the mezzanine floors are re-expanded to provide an increase in usable space. This option was not pursued as a viable scheme due to the increased negative impacts on the historic character, volumes, and potentially required exterior alterations including the windows.

Proposed Base Interior

The proposed interior rehabilitation plans are a result of the given project restraints as described above combined with recommendations and requirements presented for seismic and MEP systems upgrades. In addition to preserving existing historic character-defining features and spaces, other goals for the proposed interior are as follows:

- Reopen stairs and corridors
- Reintroduce interior windows, glazed doors, and skylights
- Create more inviting entrances
- Introduce gathering spaces or “hearths”
- Consolidate the program
- Improve wayfinding and organizational logic
- Return interior spaces to their historic volumes, providing more flexibility to the program and therefore increasing longevity of the building

Hearths and Meeting Rooms

Areas adjacent to stairs in the southeast and southwest corners have been visually reopened to serve as shared lounges and meeting rooms. The use of these spaces are interchangeable, and the intention is to provide more gathering places for math students with blackboards at the same time reopening these corners for public use as originally designed. These spaces may require fire-rated partitions, preferably glass, pending further code review and design development. See Occupancy and Egress below for more code information. At mezzanine levels where the west end is inaccessible by elevator, the use at the southwest corner must repeat at other accessible levels.

Classrooms and Offices

Within this base option is flexibility to shift the balance between office and classroom space while meeting preservation objectives and maintaining a logical organization. Classrooms and offices were assigned per historic function with the existing program in mind. The classroom and office volumes are organized such that they can be interchanged. For example, if more office space is required, classrooms can be divided. Alternately, office spaces can be combined to become classrooms. In addition, if shared offices are undesirable, rooms proposed as offices can be further subdivided for privacy.

Assigned Persons

The proposed base interior program is designed to fit a minimum of 423 persons and a maximum of 479. These calculations are based upon classroom and office layouts provided at the end of this section. Classroom Layout Options 1 and 2 illustrate 19 sf per student as the recommended occupancy. Classroom Layout Option 3 illustrates a maximum occupancy scheme at 17 sf per student. For offices, two persons per identified faculty office space is recommended as illustrated in Faculty Layout Option 1. An alternate would be shared faculty offices, fitting three faculty members each. See Faculty Layout Option 2. Graduate student offices can fit at minimum 6, maximum 7 persons. See Grad Office Layout Options 1 and 2. All proposed options are designed to meet UO campus standards.

The existing program in 2017 has a total assigned occupancy of 558 persons but a recommended quantity of 453. They are distributed among 12 classrooms, 12 graduate student offices, and 23 faculty offices. The proposed base interior program has a recommended assigned occupancy of 423 persons, with potential to increase to 479 persons depending on classroom and office furniture layouts as described above. Persons are distributed among 9 classrooms, 3 graduate student offices, 4 faculty offices, and 12 hearth spaces. Comparing the recommended assigned occupancy of the proposed program to the existing, there is a total displacement of approximately 30 persons to be reassigned elsewhere on campus. See Program Comparison chart on page 96.

Occupancy and Egress

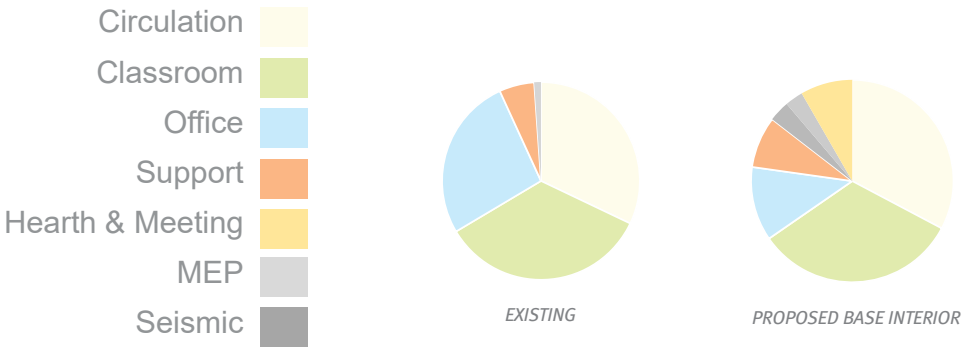
For this study, Deady Hall is identified as a Type III B building. Occupancy was calculated based upon the 2014 Oregon Structural Specialty Code and is 553 persons, requiring 11 water closets. Actual water closets proposed is 14 total, leaving potential for removal of select restrooms to make room for more private offices.

The longest means of egress is 242’ from the third floor, down the stair corridors at either end, and out either of the first floor main entrances. According to code, the longest allowable travel distance without a fire-rated stair is 250’. With this information known, both stairs may be left open to corridors, so long as the building is sprinklered. Further code analysis is required during design development.

Net Square Feet

See pie charts on the opposite page for a visual comparison of the existing program to the Proposed Base Interior. The area occupied by seismic improvements in the Proposed Base Interior is based upon the shear wall recommendations in Structural System section 1.04. The area occupied by MEP in the Proposed Base Interior is based upon the recommendations in MEP Systems section 1.05, and utilizes the HVAC option 2 area as illustrated in the Proposed Base Interior floor plans. For total square feet, see the respective MEP and Structural sections.

NET SQUARE FEET COMPARISON



Proposed Second Floor Alternate

Using the Proposed Base Interior, an alternate is presented to infill the south side of the second floor mezzanine in an effort to retain desired office space. The current 2017 program at this mezzanine level includes two small offices south of the primary corridor at the west end (See Appendix for current program diagrams). Their floor plate intersects the south elevation windows. This condition could repeat along the entire south side of the building, creating a level of lower-height offices on the second floor mezzanine. In this proposed alternate, the corridor lending access to these new spaces is pulled back from the primary corridor to allow for the full-height restoration of the second floor corridor

Assigned Persons

The proposed Second Floor Alternate has a recommended assigned occupancy of 427 persons, with potential to increase to 481 persons depending on classroom and office furniture layouts as described in the proposed base interior. Persons are distributed among 9 classrooms, 3 graduate student offices, 8 faculty offices, and 12 hearth spaces. Comparing the recommended assigned occupancy of the proposed program to the existing, there is a total displacement of approximately 26 persons to be redistributed elsewhere on campus. See Program Comparison chart on the following page.

Occupancy and Egress

Introducing this secondary corridor will make the second floor mezzanine ADA accessible from end to end, unlike the first floor mezzanine that would remain disconnected as detailed in the Proposed Base Interior.

Following the same standards as described above in the baseline interior option, occupancy for the entire building using the second floor alternate plan is 573 persons, requiring 11 water clos-ets. Actual water closets proposed is 16 total, leaving potential for removal of select restrooms to make room for private offices or gender neutral facilities.

Proposed Third Floor Alternate

Another alternate to the proposed base option above is to reopen the third floor, returning it to an assembly space that optimizes the natural light of the dormered windows and a restored skylight. All other floors would remain the same as the proposed base interior. While the original 1876 third floor was completely open, full restoration of the entire third floor to an open assembly space is not possible due

to water closet requirements and the elevator and mechanical shafts that subdivide the total area.

Assigned Persons

The proposed Second Floor Alternate has a recommended assigned occupancy of 427 persons, with potential to increase to 481 persons depending on classroom and office furniture layouts as described in the proposed base interior. Persons are distributed among 9 classrooms, 3 graduate student offices, 8 faculty offices, and 12 hearth spaces. Comparing the recommended assigned occupancy of the proposed program to the existing, there is a total displacement of approximately 26 persons to be redistributed elsewhere on campus. See Program Comparison chart on the following page.

Occupancy and Egress

Following the same standards as described above in the baseline interior option, occupancy for the third floor alternate is 624 persons, requiring 12 water closets. Actual water closets proposed is 16 total, leaving potential for removal of select restrooms to make room for more private offices.

Per code, occupancy at the third floor classroom may allow up to 390 persons depending on the furniture used and assembly type. With restrictions in egress within the historic building, no more than 270 persons should be allowed. As proposed with the given furniture layout on page 107, 182 persons is recommended.

PROGRAM COMPARISON CHART

Existing Program				Recommended Persons		Actual Assigned Persons	
	Room Type	Room Qty	Total SF	SF / Person	Total	SF/Person	Total
	Circulation	-	5516	-	-	-	-
	Classroom	12	7178	19 SF	378	14 SF	489
	Grad Office	12	2872	60 SF	48	70 SF	41
	Faculty Office	23	2705	100 SF	27	96 SF	28
	Hearth	0	0	-	-	-	-
	Support	-	1441	-	-	-	-
	Totals	**47**	**19712**		**453**		**558**

Proposed Base Interior				Recommended Persons		Maximum Persons	
	Room Type	Room Qty	Total SF	SF / Person	Total	SF / Person	Total
	Circulation	-	6650	-	-	-	-
	Classroom	9	6629	19 SF (Options 1 or 2)*	349	17 SF (Option 3)*	390
	Grad Office	3	990	60 SF (Option 1)*	18	50 SF (Option 2)*	21
	Faculty Office	4	1415	140 SF (Option 1)*	8	100 SF (Option 2)*	12
	Hearth	12	1690	35 SF	48	30 SF	56
	Support	-	2182	-	-	-	-
	Totals	**28**	**19556**		**423**		**479**

Proposed Base + Second Floor Alternate				Recommended Persons		Maximum Persons	
	Room Type	Room Qty	Total SF	SF / Person	Total	SF / Person	Total
	Circulation	-	7026	-	-	-	-
	Classroom	9	6629	19 SF (Options 1 or 2)*	349	17 SF (Option 3)*	390
	Grad Office	3	990	60 SF (Option 1)*	18	50 SF (Option 2)*	21
	Faculty Office	8	2070	140 SF (Option 1)*	12	100 SF (Option 2)*	14
	Hearth	12	1690	35 SF	48	30 SF	56
	Support	-	2182	-	-	-	-
	Totals	**32**	**20587**		**427**		**481**

Proposed Base + Third Floor Alternate				Recommended Persons		Maximum Persons	
	Room Type	Room Qty	Total SF	SF / Person	Total	SF / Person	Total
	Circulation	-	6095	-	-	-	-
	Classroom	7	7331	19 SF (Options 1 or 2)*	386	17 SF (Option 3)*	431
	Grad Office	3	990	60 SF (Option 1)*	16	50 SF (Option 2)*	21
	Faculty Office	3	1040	140 SF (Option 1)*	6	100 SF (Option 2)*	10
	Hearth	12	1693	35 SF	48	30 SF	56
	Support	-	2446	-	-	-	-
	Totals	**25**	**19595**		**456**		**519**

*See room configuration diagrams in the proposed interior plans
Note: recommended persons based on actual assigned seating, not occupancy calculations

INTERIOR FINISHES

The interior finishes of Deady Hall have been extensively altered over the years by renovations throughout the twentieth century that removed much of the original fabric. Based on historic images and drawings dated 1914 and prior, original interior finishes included wood stairs, wood wainscoting, built-in storage cabinetry and chalkboards, wood panel doors, transoms, decorative trim, painted plaster walls and ceilings, gas pendant lights, and a combination of wood floors and decorative carpet. Additional features included decorative arched interior doors at the basement level with sidelites.

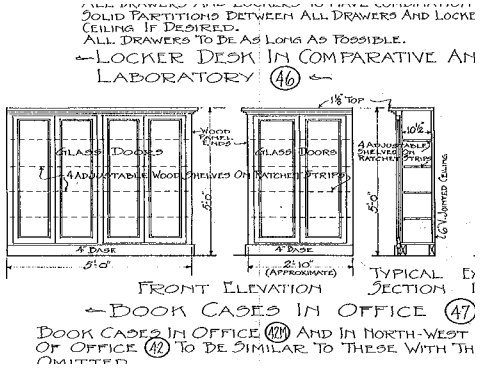


Image 59: Example of historic detailed casework once common in all classrooms and offices but no longer extant. Drawing from the 1914 renovation set.

Few examples of the historic interior finishes remain. The northeast and northwest corner wood stairs are intact, but their wood treads and landings are treated with carpet and metal nosing. All floors are finished with either vinyl composite tile (VCT) or modern carpet, with the exception of wood flooring at the first floor mezzanine storage/corridor area installed in 1952. All tall wood baseboards have been replaced with rubber bases. Most walls retain a solid painted finish and are either plaster or gypsum board. Chalkboards and non-historic chair rails line the perimeter of many classrooms. Original painted plaster ceilings have predominately been concealed with 12”x12” acoustical ceiling tile (ACT). Lighting is an inconsistent combination of modern fluorescent strips, emergency sconces, and ‘schoolhouse’ style fixtures. Interior wood window trim is likely original to 1914 and is painted. Most interior door openings have been altered over the years, removing evidence of original doors and trim. Restrooms are tiled with contemporary fixtures and stalls.

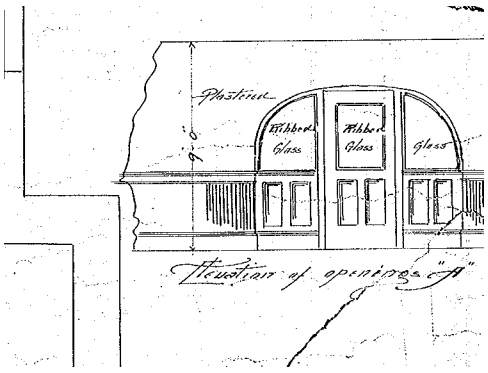


Image 60: Detail of the arched interior door openings at the basement level as designed in the 1902 drawings.

Existing Conditions

Remaining historic 1914 finishes and features are in good to fair condition. The interior wood stairs show signs of wear, see Vertical Transportation section for condition details. Built-in accessories such as

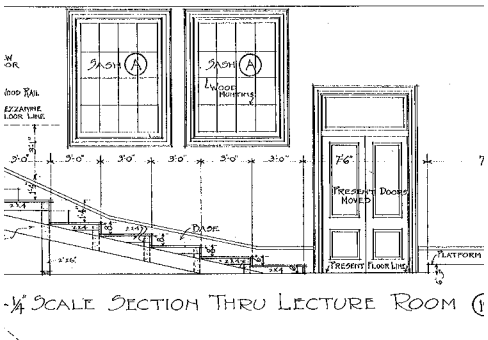


Image 61: Interior elevation of a typical classroom in 1914 with double doors leading out to the primary corridor with transom windows and mezzanine level windows for improved natural light.

chalkboards and all window and door trim are in good, painted condition.

Non-historic finishes are in fair condition and are not compatible with the historic building. VCT floors are worn and color is fading. Walls are painted an incohesive color scheme that varies by floor. Ceiling tiles are discolored and incompatible. Doors are modern solid slabs. All interior windows and transoms have been removed. Additionally, the inconsistency of finishes from floor to floor is disorienting for self guided wayfinding.

Image 62: Detail of typical carpet tile, used throughout the building in various colors and patterns.

Image 63: Detail of typical VCT that is heavily worn in classrooms.

Image 64: Bold colors and carpeting at a stair landing. Colors vary throughout the building.

Recommendations

Finishes should be historically compatible, durable, and consistent throughout the building.

Floors

Remove all existing VCT, tile, and carpeting at floors, stairs, and stair landings. Restore wood stairs and landings – see Vertical Transportation section for interior stair recommendations.

Install new wood flooring over new structural plywood to match 1914 floors. Make sure top stair treads and new finish floors align. A historically compatible alternative is linoleum.

Restroom floors should be restored to match the composite floors specified in the 1914 drawings. This is identified as “Raecolith”, produced by a composite floor company based out of the Pacific Northwest but no longer in operation.

Walls

All existing walls that will remain in place should be patched and repainted. Paint analysis of samples taken from known historic features and surfaces can determine the original interior color scheme.

New walls should be gypsum board matching the finish of the remaining plaster walls. Interior faces of exterior walls with added concrete shear walls should be furred out with gypsum board to provide space for required mechanical and electrical. All interior trim at these locations should be extended to compensate for added wall thicknesses - see Trim section below.

In restrooms, remove tile at all walls and refinish to match the composite walls specified in the 1914 drawings.

Image 65: Typical modern tile walls and floors in restrooms.

Ceilings

Remove ACT and restore painted plaster (or gypsum board) ceilings at all locations. Refinish exposed plaster to match original where known.

Image 66: Detail of common ACT found throughout the building.

Provide a lowered ceiling in the restored corridors with access panels to conceal piping and wiring.

Interior Windows/Doors

Restore interior windows, glazed doors, and transoms where feasible in the corridors, including 1914 mezzanine-level corridor windows and arched door openings with sidelites in the basement, to bring natural light further into the building.

Replace all doors with wood panel doors and inoperable transoms at select locations based upon 1914 drawings. Finish options included painted or stained.

Introduce lever handle sets at all interior doors to comply with ADA requirements. All hardware to be period-appropriate and in an antique brass finish to reflect the style of existing hardware at the main entrance exterior doors.

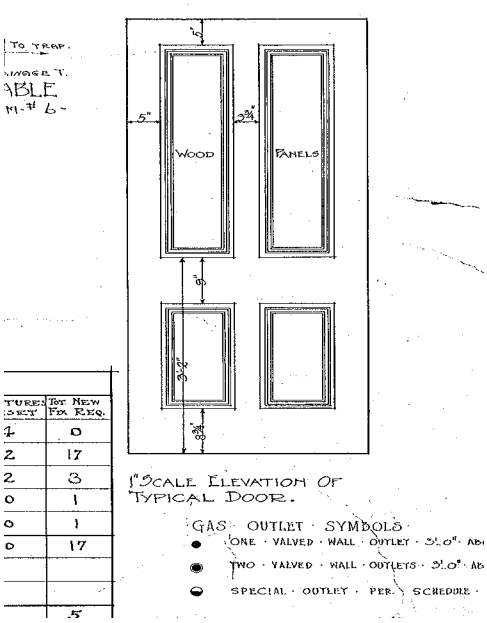


Image 67: Detail of 1914 interior doors, which were 4- or 5-panel units throughout the building.

Trim

Non-original chair rails and rubber bases should be removed throughout. Replace with new wood baseboards and wainscotting to match the 1914 profiles as detailed in the drawing set.

Retain and repair wood window trim. Extend heads, jambs, and sills to accommodate increased thicknesses at shear walls. Salvage and reinstall interior casing trim. Install new trim at new doors and framed openings compatible with 1914 profiles. Finish options for trim included painted or stained.

Lighting

Replace all light fixtures with period-appropriate reproductions or custom units in an antique brass finish. All light bulbs should meet campus standards. See MEP Systems section on Electrical, Lighting, & Technology for additional lighting recommendations.

Restrooms

Plumbing fixtures should be historically compatible energy efficient porcelain fixtures.

Toilet partitions were historically a combination of wood and marble. Consider matching historic design for new partitions.

Stairs

Repair and refinish banister railings, stringer and landing paneling, and newel posts.

Chalkboards

Retain or salvage and reinstall chalkboards in classrooms.

Image 68: Detail of typical interior door trim.

Image 69: Detail of interior window trim at a recessed window location. Recessed window trim will not be impacted by the addition of shear walls.

Image 70: Interior stair finishes are a combination of painted paneling and natural finish railings.

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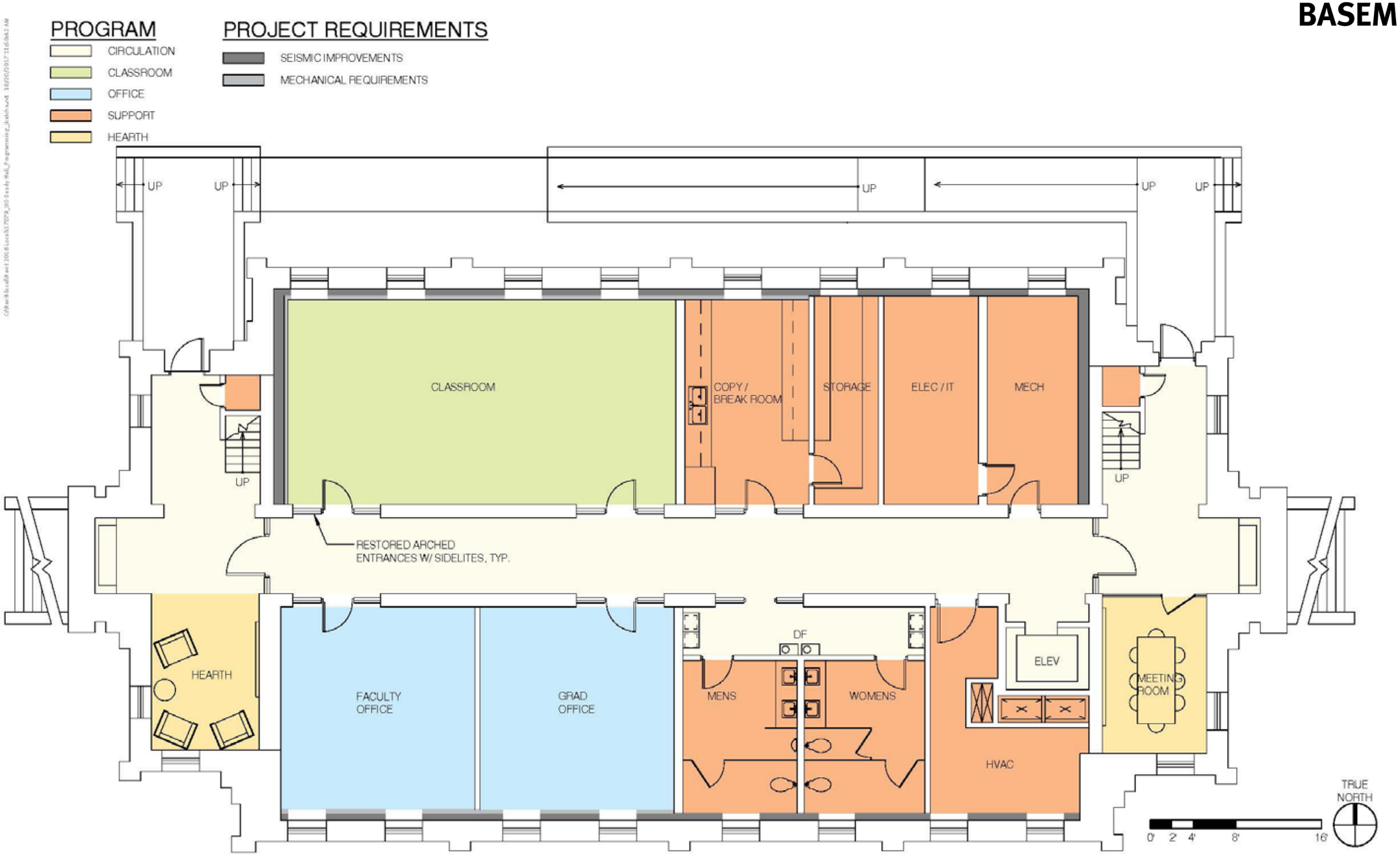
BASEMENT


PROGRAM
CIRCULATION
CLASSROOM
OFFICE
SUPPORT
HEARTH
PROJECT REQUIREMENTS
SEISMIC IMPROVEMENTS
MECHANICAL REQUIREMENTS
UP
UP
UP
UP
UP
CLASSROOM
COPY / BREAK ROOM
STORAGE
ELEC / IT
MECH
UP
RESTORED ARCHED ENTRANCES W/ SIDELITES, TYP.
HEARTH
FACULTY OFFICE
GRAD OFFICE
DF
MENS
WOMENS
ELEV
HVAC
MEETING ROOM
TRUE NORTH
0' 2' 4' 8' 16'

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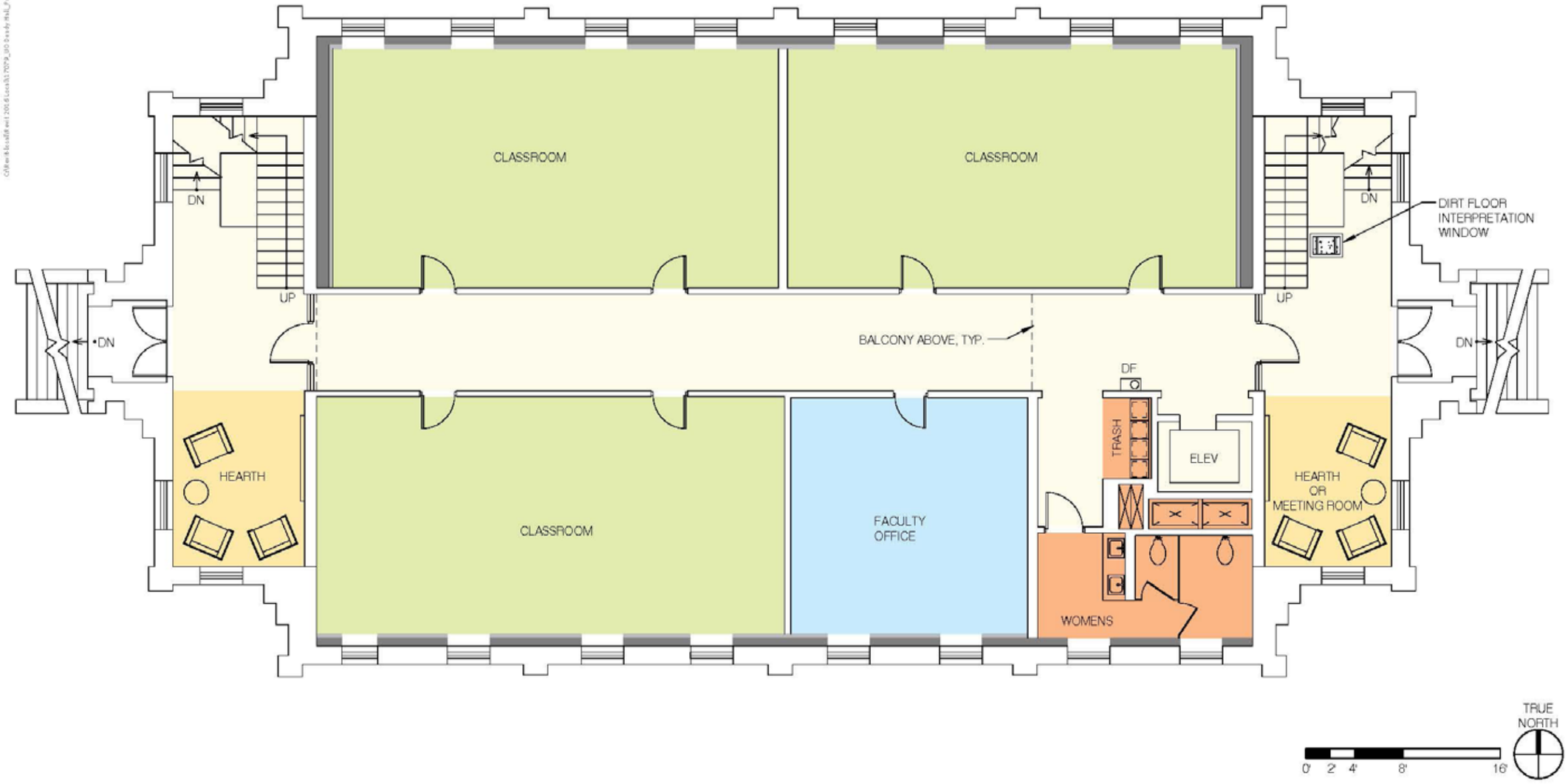
FLOOR 1

PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS



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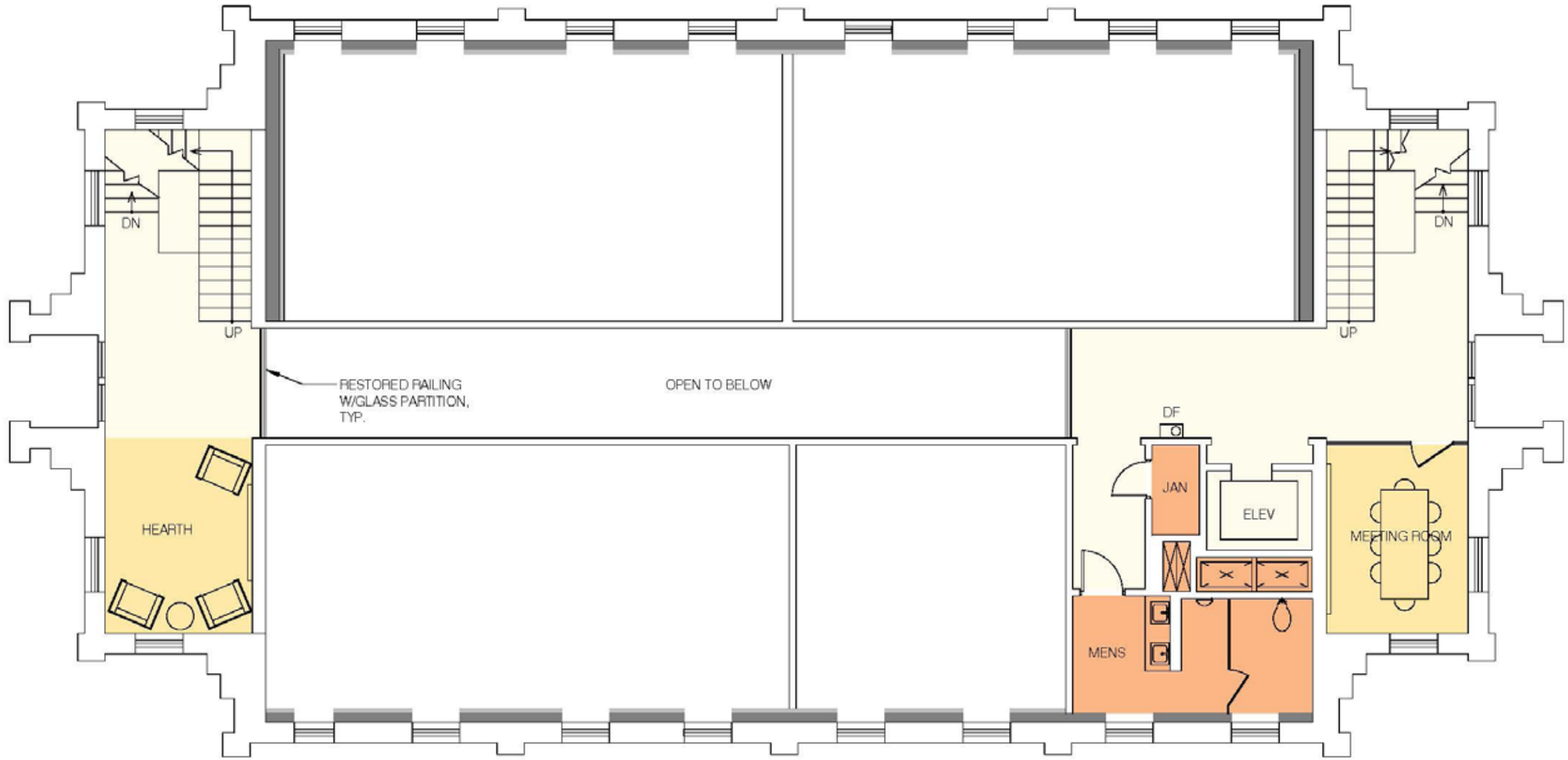
FLOOR 1 MEZZANINE

PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS



TRUE NORTH

0' 2' 4' 8' 16'

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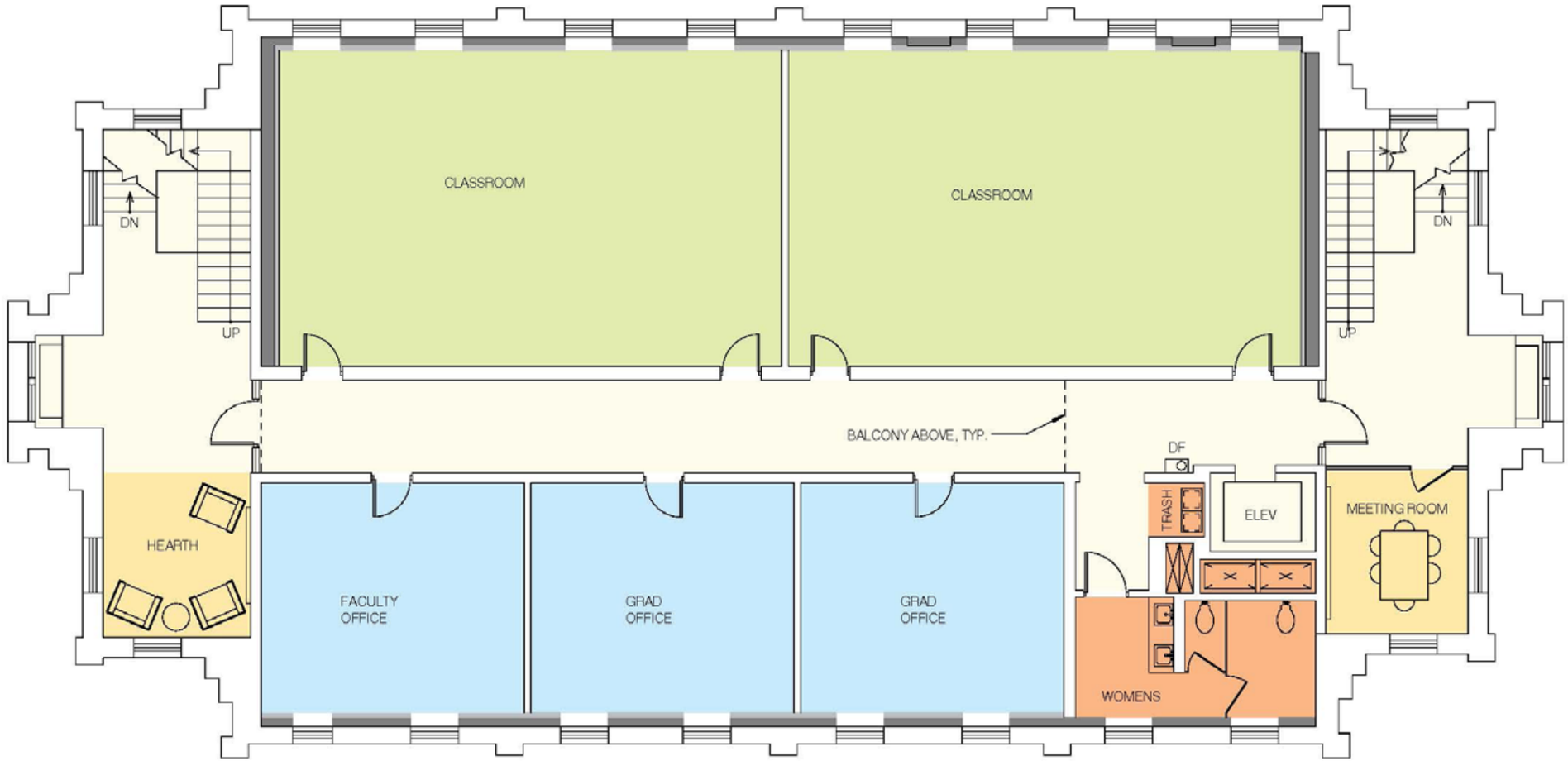
FLOOR 2

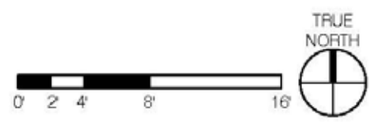
PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS





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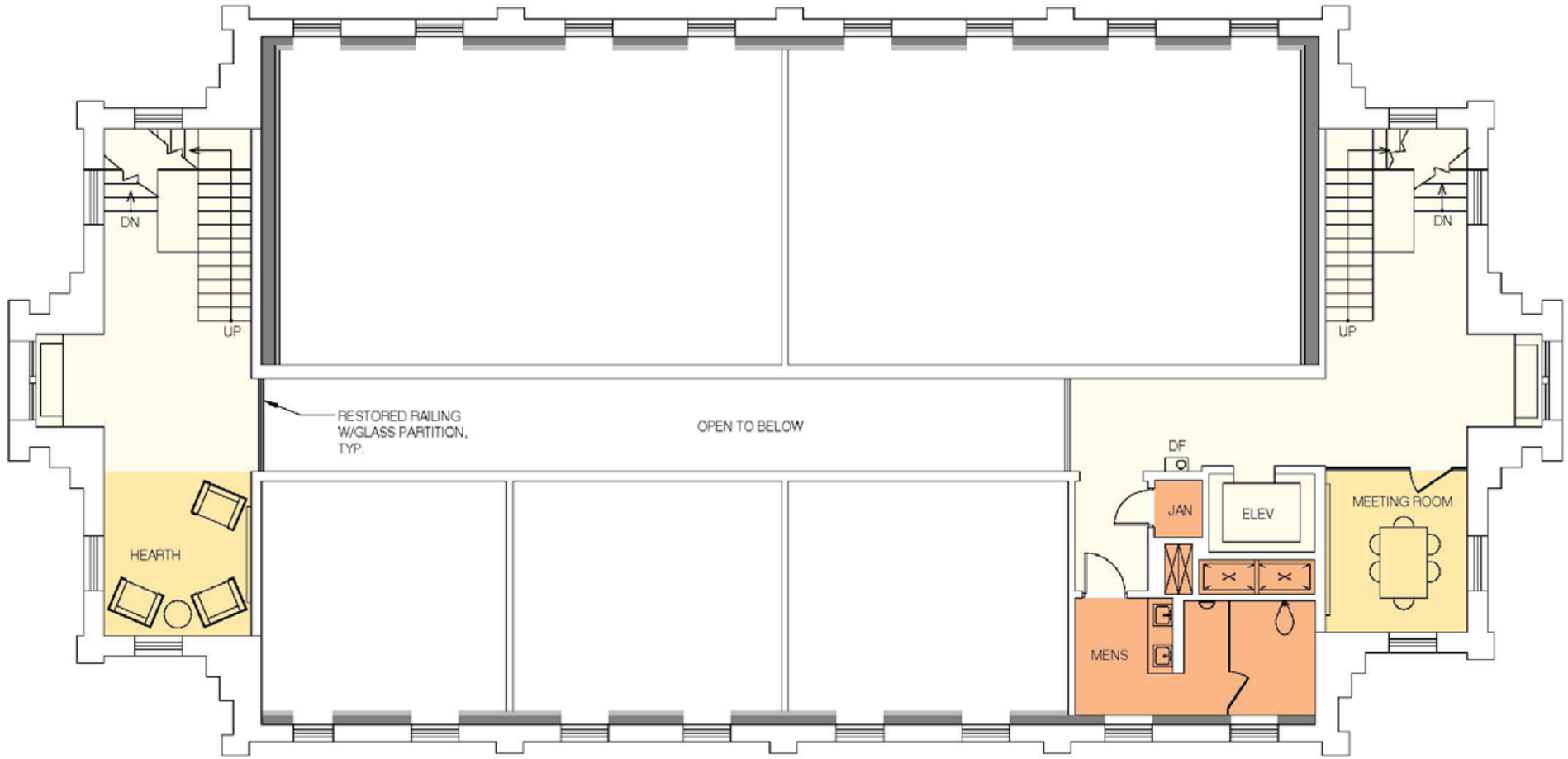
FLOOR 2 MEZZANINE

PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS



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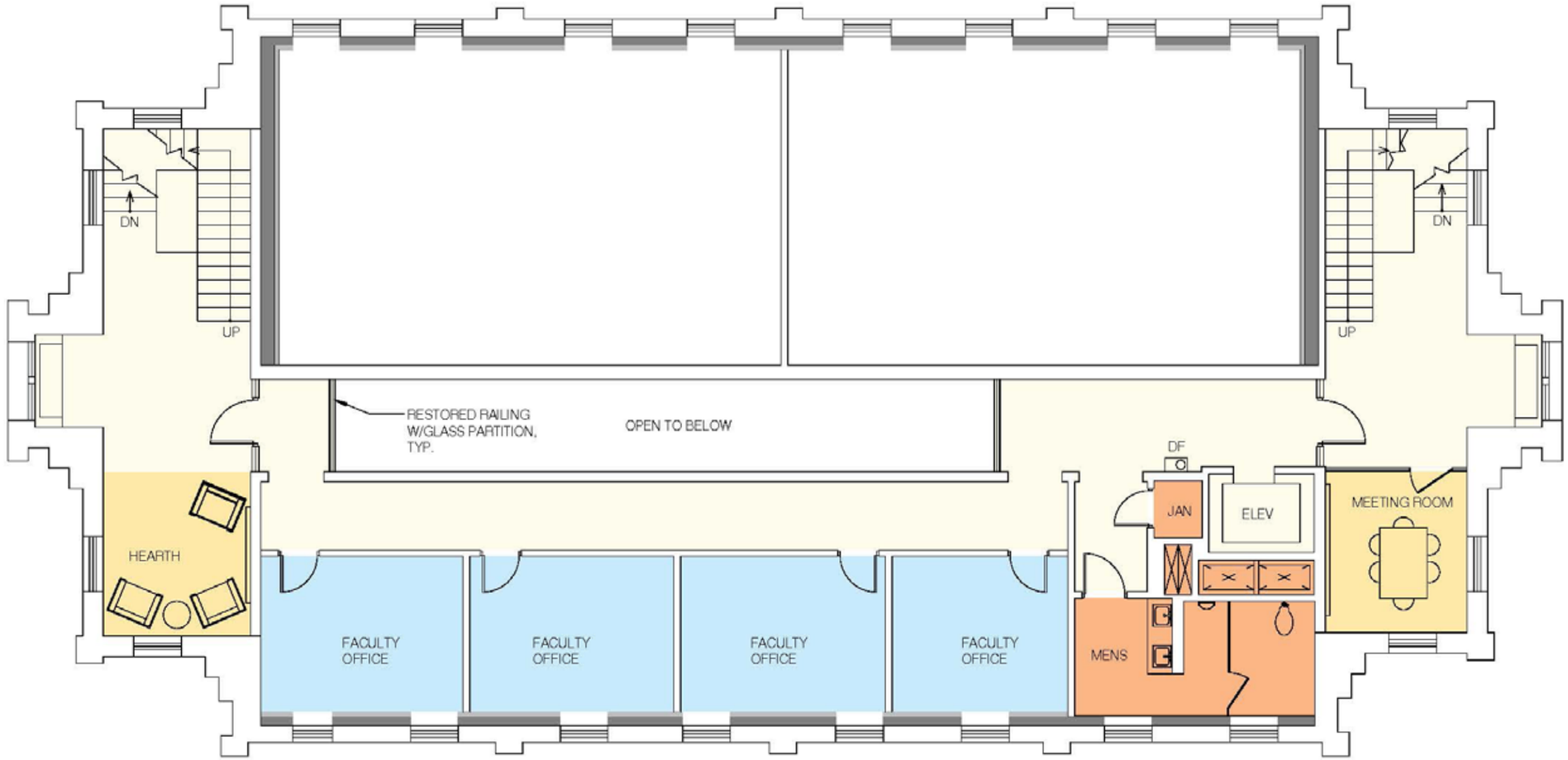
FLOOR 2 MEZZANINE ALTERNATE

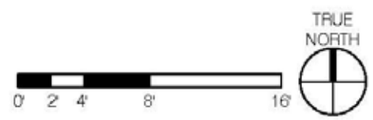
PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS





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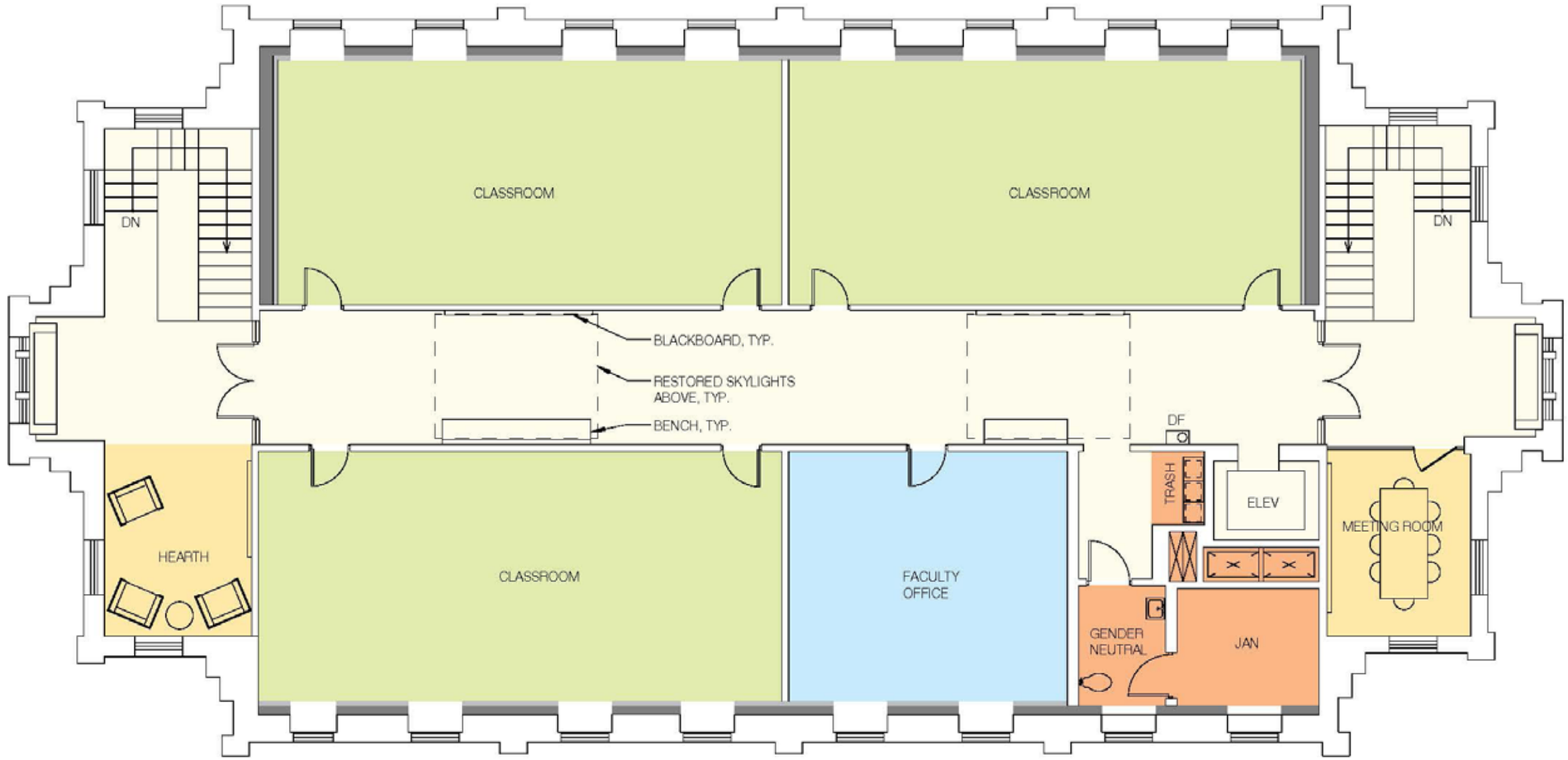
FLOOR 3

PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS



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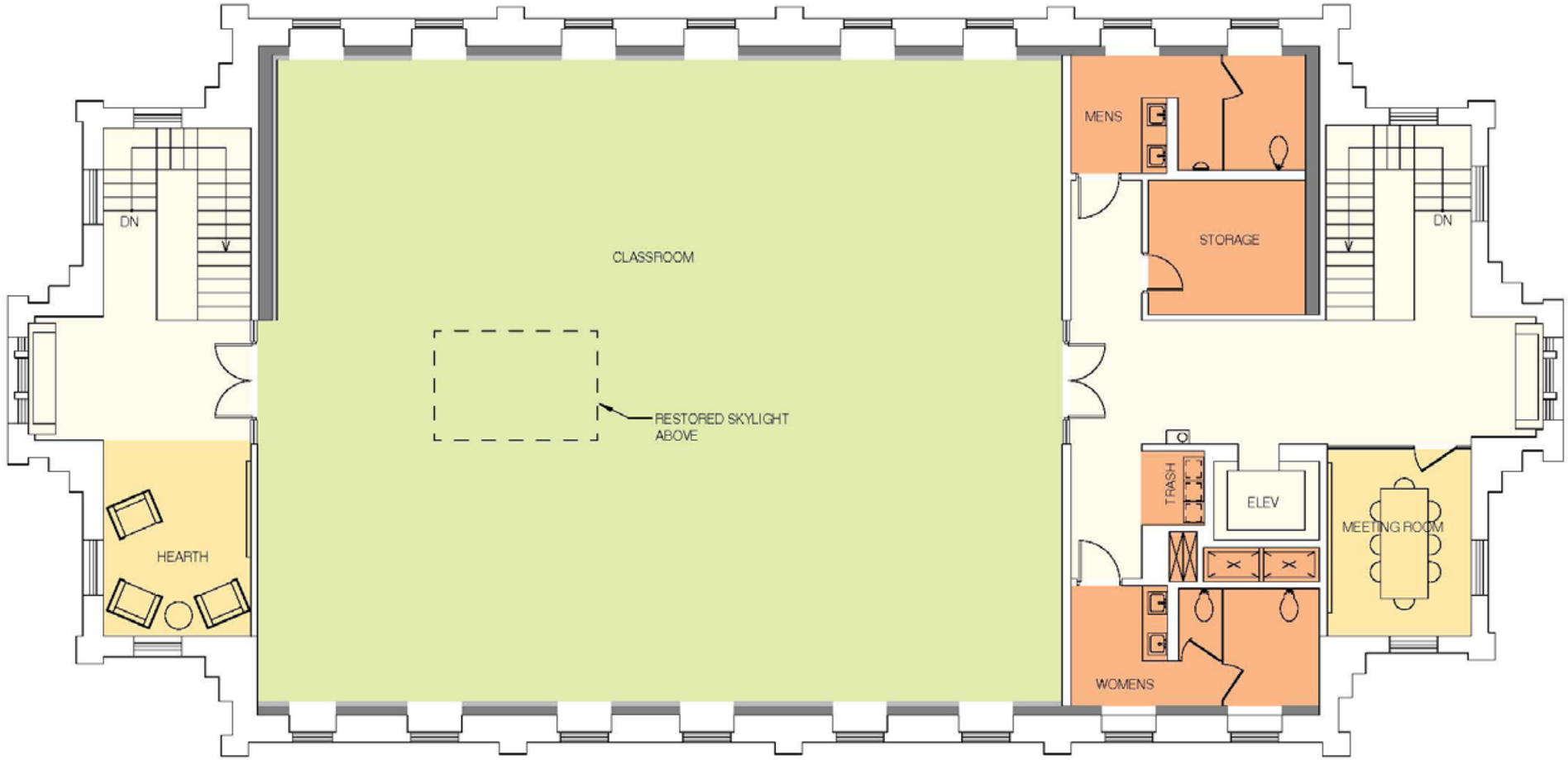
FLOOR 3 ALTERNATE

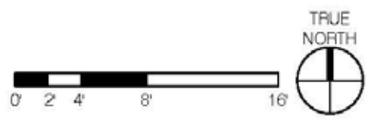
PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT
- HEARTH

PROJECT REQUIREMENTS

- SEISMIC IMPROVEMENTS
- MECHANICAL REQUIREMENTS





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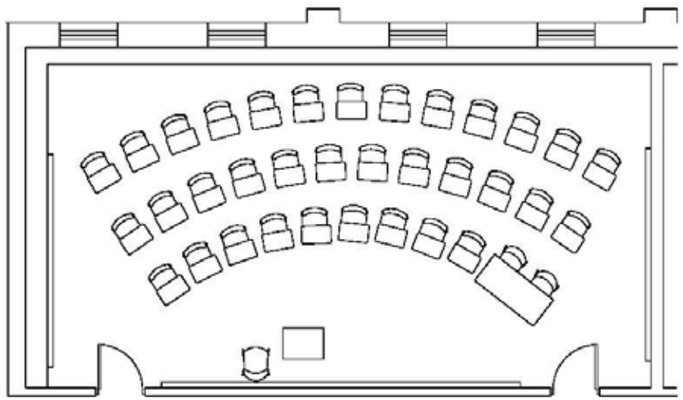
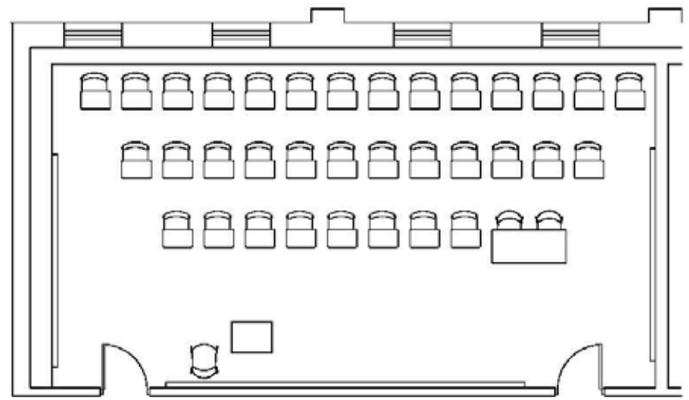
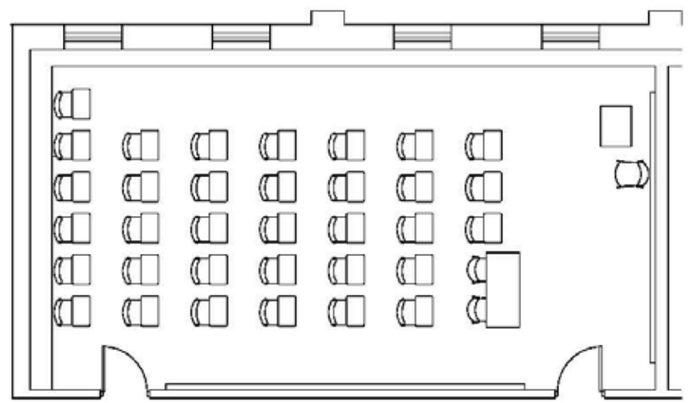
CLASSROOMS



1 CLASSROOM LAYOUT - OPTION 1
1/8" = 1'-0"



2 CLASSROOM LAYOUT - OPTION 2
1/8" = 1'-0"



3 CLASSROOM LAYOUT - OPTION 3
1/8" = 1'-0"

0' 2' 4' 8' 16'

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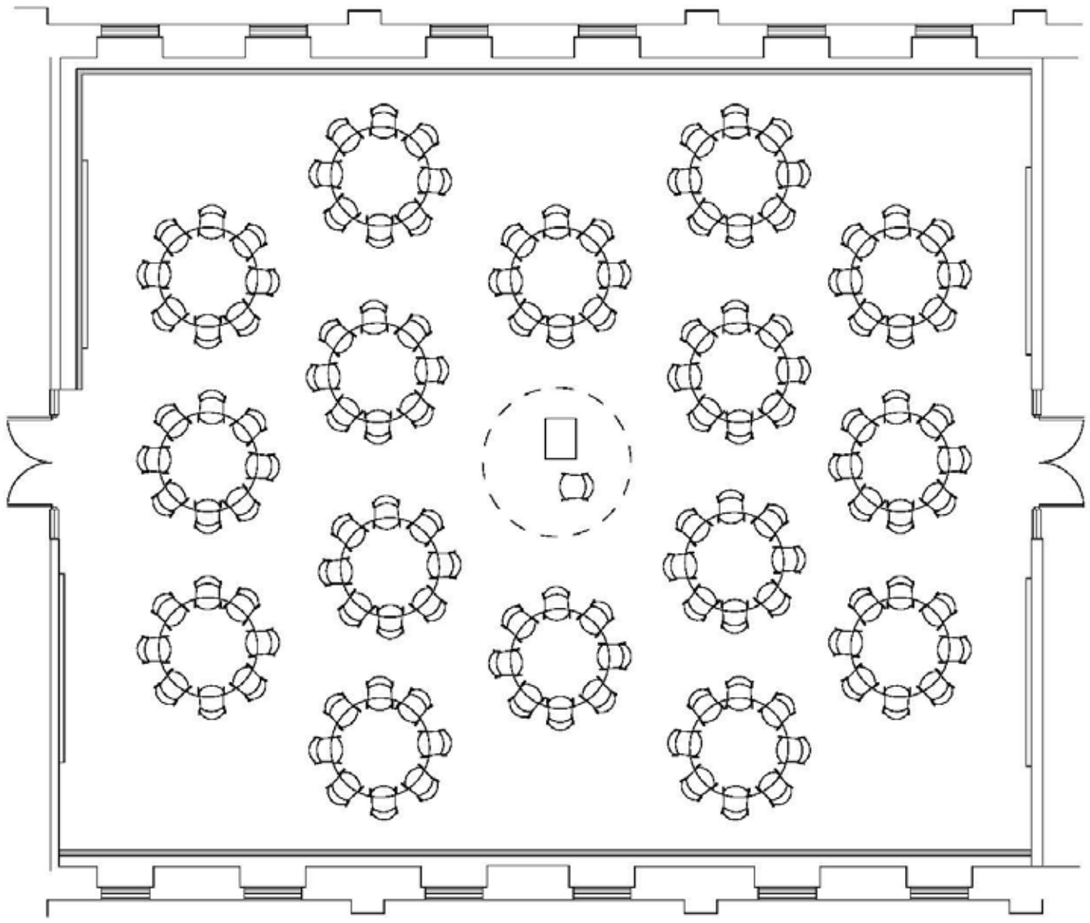
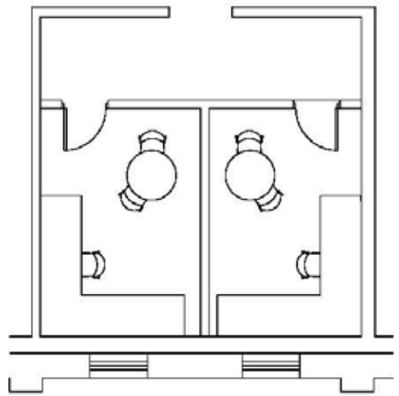
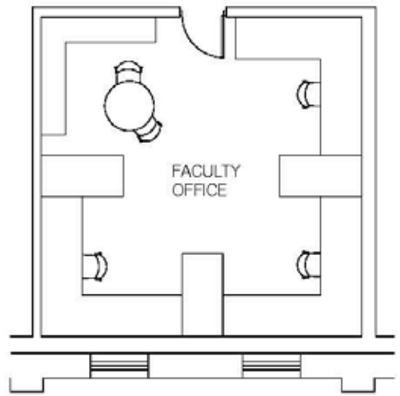
ASSEMBLY AND OFFICES



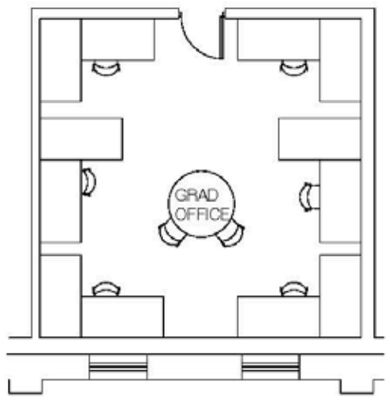
5 THIRD FLOOR CLASSROOM - ALTERNATE
1/8" = 1'-0"



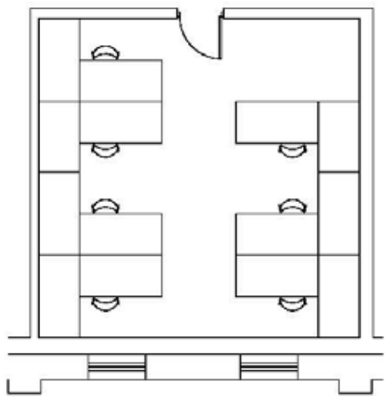
1 FACULTY LAYOUT - OPTION 1
1/8" = 1'-0"



2 FACULTY LAYOUT - OPTION 2
1/8" = 1'-0"



3 GRAD OFFICE LAYOUT - OPTION 1
1/8" = 1'-0"



4 GRAD OFFICE LAYOUT - OPTION 2
1/8" = 1'-0"

0' 2' 4' 8' 16'

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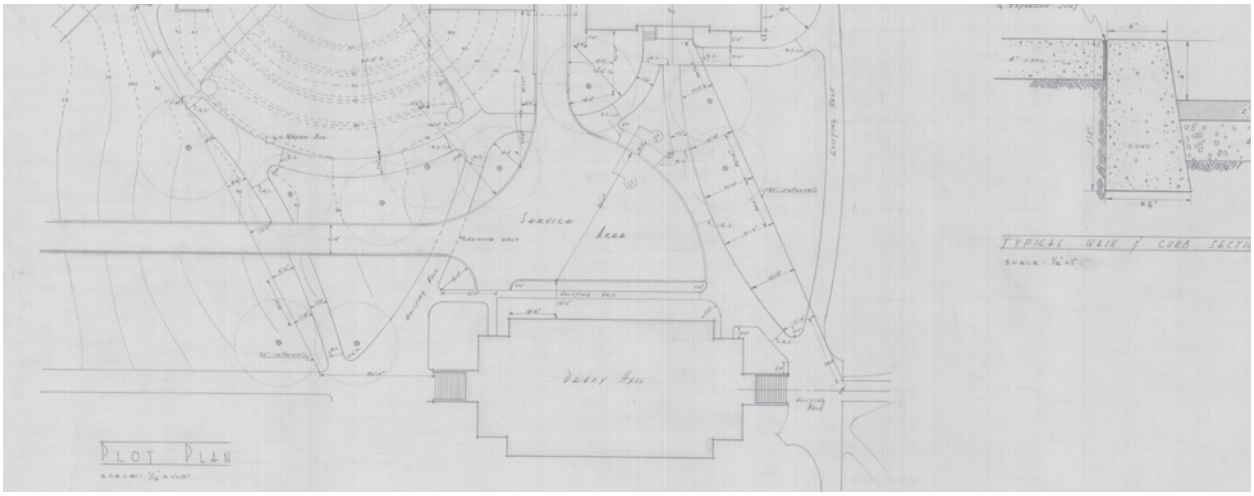


The following analyses and recommendations focus on the site features within the project boundary, including pathways, ramps and entry stairs, as well as site utilities.

SITE ACCESSIBILITY, WALKS AND PAVING

Existing Conditions

Deady Hall currently has stepped concrete entrances on the east and west sides of the building, and an accessible ramp on the north side of the building at the west end. Concrete pathways are on all sides of the building and extend out in multiple directions.

The east and west entrances are in poor condition. Past repairs of the concrete steps and side walls are spalling and cracking. The concrete pathways along the east and south sides of the building are cracked and tree roots have heaved some of the sidewalk panels. The sidewalks on the west and north sides of the building are relatively new and are in good condition; however, sidewalk slopes appear to exceed campus accessibility guidelines.

The existing exterior ADA ramp along the north elevation appears to meet campus ADA guidelines,

Image 71: The sidewalk extending from the west end of Deady Hall, also known as the "Deady Walk", is in good condition.

but does not meet University Accessibility goals. The ramp is in fair condition, with some minor cracking and spalling observed on the side walls. The ramp provides ADA access to the west basement level door on the north elevation; however, the existing building elevator is at the east end of the building.

Recommendations

The east and west building entrances are significant historic character-defining features requiring sensitive repair and treatment. Repair east and west building entrance steps, landings and side walls. Replace existing single railing with two metal rails inboard of the side walls that match the historic character of the building. Consider replacing damaged existing wall caps with decorative caps to match the original design of the building (see Architecture). Resurface existing entry concrete steps, landing and sidewalls. Resurface existing concrete by sand blasting and cleaning the concrete, injecting epoxy into any cracks, and applying two to three coasts of dressing to achieve a Class A finish.

Replace approximately 5,000 square-feet of existing concrete sidewalks on the east, west and south sides of the building. Concrete sidewalks to be installed with 6 inches of concrete over 4 inches of aggregate base on compacted subgrade. Concrete slopes and widths to meet campus accessibility standards.

In the proposed interior rehabilitation plans (see Archtiectural), the ADA ramp is mirrored to provide direct access to the east elevator location. Construction of a new exterior ramp on to the east door will require a section of the existing utility tunnel near the mechanical room to be reconstructed. Construct a new vault with an approximate footprint of 20 ft by 30 ft., and reinstall existing utilities (steam, condensate, chilled water, service air, power, transformer, potable water, fire protection water and communications) within the new tunnel/vault area. The new vault/tunnel may require an above-ground ventilation structure. Further investigation is required.

Image 72: Exterior ADA ramp at the north elevation, in fair condition.

Image 73: Exterior sidewalks in good condition, with some cracking and upheaving from nearby tree roots.

Image 74: Storm drainage and pipe access at the down spouts at each corner of the building's exterior.

Image 75: One trench drain is located at the base of the ADA ramp at the north elevation.

SITE UTILITIES

Existing Conditions

Deady Hall is currently served entirely by campus utilities and is not directly connected to City of Eugene or franchise utilities. In general, Deady Hall has adequate existing utilities serving the building. In some cases, the existing utilities are not well documented, do not meet code, or are in poor condition.

Domestic and Fire Protection Water

The existing campus water system has multiple cross-connections between fire lines and irrigation systems, which can pose cross-contamination issues. Details about building water connections are often not well documented. Based on UO maps, Deady Hall has a 3-inch domestic water service and 4-inch fire protection water service. Existing backflow is located within the building basement and appears to be in acceptable condition.

The building water services are connected to a 5-inch water line that is inside the utility tunnel located on the north side of the building at the east corner. The 5-inch water line extends east and then north in the tunnel. The 5-inch line connects to a looped campus water system. A 4-inch line leading to Villard Hall, outside of the tunnel, is also connected to the building services.

The existing fire department connection exits the building at the northeast corner and extends around the bottom face of the building along the north exterior wall, where the hose connection is located at the west end.

Sanitary Sewer

According to UO records, there are two sanitary sewer lines serving the building on the south side. The sizes of these services are unknown. The laterals run east from the building and connect to a 6-inch line that was built in 1893. The 6-inch line runs northeast for approximately 400 feet, then it runs east through the courtyard of Lawrence Hall. Within the courtyard, the line turns north and runs under Lawrence Hall and eventually connects to a public sewer main in Franklin Boulevard.

According to the University, the existing 6-inch line is in poor condition and needs to be replaced, relocated, or lined. The existing line will need to be video scoped to determine the extent of the line that will need to be repair.

Storm Drainage

According to UO records and site observations, Deady Hall has four roof downspouts at the exterior corners of the building. These downspouts were recently replaced by the University. The new downspouts appear to be 3-inch stainless steel, with leaf traps at the bottom. When the roof drains were replaced, the below grade piping was abandoned in-place. Some cleanup of abandoned pipe is needed, especially where piping is exposed in the areaways.

The building roof drains are collected in 4-inch pipes and conveyed west to a 6-inch line that runs northwest. The 6-inch pipe is large enough to convey the 10-year storm event, based on our preliminary calculations. The condition of the 6-inch line is currently unknown.

There is no evidence of site drainage structures, such as catch basins or trench drains, with the exception of a small trench drain at the bottom of the exterior accessible ramp. In addition, we have found no record of a sub-drainage system or perimeter footing drain.

Existing storm drainage is not treated to current City of Eugene standards. The roof drainage is conveyed directly to campus storm piping. The site drainage sheet flows into landscape areas, where it generally ponds and infiltrates.

Recommendations

Domestic and Fire Protection Water

Reroute existing fire department connection (FDC) from the interior mechanical room, through the building, and to the existing location of the FDC. FDC to be 4-inch ductile iron, with mechanical joints, pipe supports and anchors.

Sanitary Sewer

Video scope approximately 700 feet existing 6-inch sewer line from Deady Hall to Lawrence Hall to determine the condition of the pipe. If the existing pipe is in poor condition, replace the existing 6-inch pipe and reroute the new line around Lawrence Hall to a connection point at Franklin Boulevard. New sewer pipe to be PVC ASTM D3034, with cleanouts or manholes every 100 feet. Place pipe in trench with aggregate backfill and provide surface replacement to match the existing conditions. If there are no bellies or broken sections found in the existing 6-inch line, then the existing pipe could be lined in-situ instead of being replaced. Removal and rerouting of the existing sewer line from under Lawrence Hall is recommended.

Storm Drainage

Install approximately eight new area drains around the perimeter of the building at low points in the existing ground. Area drainage to be a combination of 6-inch NDS drains, 15-inch square Gibson basins and 4-inch ACO trench drains. Grates to be cast iron and match the historic character of Deady Hall. Connect the new area drains to the existing storm drainage system at the west side of Deady Hall with 4-inch pipes and cleanouts.

Project Cost Information 1. 08

Conceptual Cost Model Estimate No. CM 1 Rev. 1

PROJECT: UO Deady Hall - Deferred Maintenance Building Assessment
LOCATION: Eugene, OR
ARCHITECT: HEA
OWNER: University of Oregon

DATE: 11/3/2017
ESTIMATE: COST MODEL

AREA SUMMARY:

Total existing building GSF 27,921

Building Area 27,921

	Description		Qty	Unit	Unit Price	Totals	$/sf	% Total
02	**DEMOLITION**					**$ 430,411**	**$ 15.42**	**3.49%**
	Sidewalks/Paving		5,000	sf	4.50	$ 22,500	$ 0.81	
	Clearing/Striping Landscaping		1	ls	2,500.00	$ 2,500	$ 0.09	
	Tree Trimming		5	ea	750.00	$ 3,750	$ 0.13	
	Partial Tunnel Demolition		1	ls	9,500.00	$ 9,500	$ 0.34	
	Demolition - Hard		27,921	sf	3.50	$ 97,724	$ 3.50	
	Interior Demolition - Soft		27,921	sf	6.50	$ 181,487	$ 6.50	
	Misc Demo Allowance		1	ls	10,000.00	$ 10,000	$ 0.36	
	Furniture (Excluded, by UO)		-	ea	25.00	$ -	$ -	
	Elevator Cab		1	ea	15,000.00	$ 15,000	$ 0.54	
	Fire Sprinkler		27,921	sf	0.15	$ 4,188	$ 0.15	
	HVAC/Plumbing		27,921	sf	1.50	$ 41,882	$ 1.50	
	Electrical		27,921	sf	1.50	$ 41,882	$ 1.50	
	Hazardous Abatement (Excluded, by UO)		-	sf	-	$ -	$ -	
03	**CONCRETE**					**$ 376,742**	**$ 13.49**	**3.05%**
	Footings		129	cy	550.00	$ 70,950	$ 2.54	
	Shear Walls		367	cy	650.00	$ 238,550	$ 8.54	
	Patch Existing Exterior Concrete Stairs (Not Replace)		2	ea	1,950.00	$ 3,900	$ 0.14	
	Slab/Wall Patch Allowance		27,921	sf	2.00	$ 55,842	$ 2.00	
	Shoring Allowance		1	ls	7,500.00	$ 7,500	$ 0.27	
04	**MASONRY**					**$ 674,125**	**$ 24.14**	**5.46%**
	Clean Exterior Skin		23,310	sf	2.00	$ 46,620	$ 1.67	
	Stone/Masonry Dowleing/Anchoring (For Egress Safety Only)		5,828	sf	14.70	$ 85,664	$ 3.07	
	Patch Exterior Skin / Tuckpointing		23,310	sf	14.00	$ 326,340	$ 11.69	
	Refinish Sand Paint Coating, Select Locations		23,310	sf	7.10	$ 165,501	$ 5.93	
	Historic Allowance		1	ls	50,000.00	$ 50,000	$ 1.79	
05	**METALS**					**$ 610,632**	**$ 21.87**	**4.95%**
	Repair/Refinish Cast Metal Features - Exterior		1	ls	5,000.00	$ 5,000	$ 0.18	
	Structural Steel		69	tn	6,500.00	$ 448,500	$ 16.06	
	Moment Frames		4	ea	11,500.00	$ 46,000	$ 1.65	
	Misc Metals		27,921	sf	1.50	$ 41,882	$ 1.50	
	Railings and Guardrails - Exterior		35	lf	350.00	$ 12,250	$ 0.44	
	Railings and Guardrails		120	lf	350.00	$ 42,000	$ 1.50	
	Safety Tie Off		-	ea	3,000.00	$ -	$ -	
	Shoring Allowance		1	ls	15,000.00	$ 15,000	$ 0.54	
06	**WOOD, PLASTICS AND COMPOSITES**					**$ 624,034**	**$ 22.35**	**5.06%**
	Wood Trim Repair/Replace - Exterior		27,921	sf	1.00	$ 27,921	$ 1.00	
	Diaphram Sheathing/Strapping		27,921	sf	7.00	$ 195,447	$ 7.00	
	Rough Carpentry		27,921	sf	1.50	$ 41,882	$ 1.50	
	Backing		27,921	sf	0.35	$ 9,772	$ 0.35	
	Casework		27,921	sf	5.50	$ 153,566	$ 5.50	
	Millwork/Paneling		27,921	sf	7.00	$ 195,447	$ 7.00	
07	**THERMAL AND MOISTURE**					**$ 62,433**	**$ 2.24**	**0.51%**
	Insulation		27,921	sf	0.85	$ 23,733	$ 0.85	
	Sealants/Caulking		1	ls	10,500.00	$ 10,500	$ 0.38	
	Clean Roofing Elements		4,700	sf	2.00	$ 9,400	$ 0.34	
	Patch Roofing Membrane		4,700	sf	4.00	$ 18,800	$ 0.67	
08	**DOORS AND WINDOWS**					**$ 671,470**	**$ 24.05**	**5.44%**
	Exterior Window Slip		106	ea	925.00	$ 98,050	$ 3.51	
	Exterior Window - Repair Allowance		106	ea	350.00	$ 37,100	$ 1.33	
	Exterior Doors - Restore Allowance		4	ea	5,500.00	$ 22,000	$ 0.79	
	Restore Skylight		182	sf	310.00	$ 56,420	$ 2.02	
	Doors/Frames/Hardware		60	ea	2,150.00	$ 129,000	$ 4.62	
	Doors Hardware Provided by UO		-	ea	-	$ -	$ -	
	Specialty Hardware Allowance		60	ea	1,500.00	$ 90,000	$ 3.22	
	Relites/Transoms		48	ea	1,800.00	$ 86,400	$ 3.09	
	Glass Wall/Partition		2,500	sf	61.00	$ 152,500	$ 5.46	
09	**FINISHES**					**$ 1,006,444**	**$ 36.05**	**8.16%**
	Stair Rehab - Existing Main Stairs		2	ea	45,000.00	$ 90,000	$ 3.22	
	Walls		21,150	sf	10.00	$ 211,500	$ 7.57	
	Shaft Wall		3,860	sf	15.00	$ 57,900	$ 2.07	
	Patch Existing Surfaces		1	ls	35,000.00	$ 35,000	$ 1.25	
	Ceilings - Drywall		27,921	sf	10.00	$ 279,210	$ 10.00	
	Ceilings - ACT		-	sf	8.00	$ -	$ -	
	Flooring - Carpet		16,795	sf	5.00	$ 83,974	$ 3.01	
	Flooring - Rubber Floor Product		8,376	sf	8.00	$ 67,010	$ 2.40	
	Flooring - Tile		2,750	sf	18.00	$ 49,500	$ 1.77	
	Tile Walls		520	sf	18.00	$ 9,360	$ 0.34	

	Painting Walls		21,150	sf	2.00	$ 42,300	$ 1.51	
	Paint Ceilings		8,376	sf	2.50	$ 20,940	$ 0.75	
	Paint Door Frames		65	ea	150.00	$ 9,750	$ 0.35	
	Historic Allowance		1	ls	50,000.00	$ 50,000	$ 1.79	
10	**SPECIALTIES**					**$ 139,248**	**$ 4.99**	**1.13%**
	Signage		27,921	sf	0.45	$ 12,564	$ 0.45	
	Hatch and Ladder		2	ea	7,500.00	$ 15,000	$ 0.54	
	Misc. Specialties (Restroom accessories, tack boards, ect..)		27,921	sf	4.00	$ 111,684	$ 4.00	
11	**EQUIPMENT**					**$ 3,450**	**$ 0.12**	**0.03%**
	Residential Appliances		3	ea	1,150.00	$ 3,450	$ 0.12	
	Owner AV Allowance - Equipment OFOI		-	sf	16.00	$ -	$ -	
	FF&E (Excluded)			ea	-	$ -	$ -	
12	**FURNISHINGS**					**$ 45,315**	**$ 1.62**	**0.37%**
	Window Coverings (Non-motorized)		4,770	sf	9.50	$ 45,315	$ 1.62	
	Classroom Seating (Excluded, assuming all furniture)		-	ea	310.00	$ -	$ -	
	FF&E (Excluded)		-	ea	-	$ -	$ -	
13	**SPECIAL CONSTRUCTION**					**$ 25,000**	**$ 0.90**	**0.20%**
	Rehab/Salvage/Reinstall Existing Building Elements		1	ls	25,000.00	$ 25,000	$ 0.90	
14	**CONVEYING**					**$ 320,000**	**$ 11.46**	**2.59%**
	Elevator Shaft Upgrades Allowance (Existing)		1	ls	15,000.00	$ 15,000	$ 0.54	
	New Elevator		5	stops	61,000.00	$ 305,000	$ 10.92	
21	**FIRE PROTECTION**					**$ 115,872**	**$ 4.15**	**0.94%**
	Fire Protection System		27,921	sf	4.15	$ 115,872	$ 4.15	
22	**PLUMBING**					**$ 256,873**	**$ 9.20**	**2.08%**
	Plumbing Distribution and Equipment		27,921	sf	9.20	$ 256,873	$ 9.20	
23	**HVAC**					**$ 1,358,445**	**$ 48.65**	**11.01%**
	Mechanical - Hydronic System (Based on Chilled Beam Option)		27,921	sf	45.00	$ 1,256,445	$ 45.00	
	Mechanical - AHU/Exhaust		8,500	cfm	12.00	$ 102,000	$ 3.65	
25	**CONTROLS**					**$ 265,250**	**$ 9.50**	**2.15%**
	BMS/Controls		27,921	sf	9.50	$ 265,250	$ 9.50	
26	**ELECTRICAL**					**$ 991,196**	**$ 35.50**	**8.04%**
	Electrical - Main Panel & Metering		27,921	sf	10.00	$ 279,210	$ 10.00	
	Electrical - Raceways		27,921	sf	1.50	$ 41,882	$ 1.50	
	Electrical - Branch Circuiting		27,921	sf	5.00	$ 139,605	$ 5.00	
	Electrical - Lighting & Controls		27,921	sf	14.00	$ 390,894	$ 14.00	
	Electrical - HVAC & Misc Equipment		27,921	sf	2.00	$ 55,842	$ 2.00	
	Electrical - Emergency Power		27,921	sf	3.00	$ 83,763	$ 3.00	
27	**COMMUNICATIONS**					**$ 209,408**	**$ 7.50**	**1.70%**
	Electrical - Telecom/Data/WIFI (Rough In Only)		27,921	sf	5.50	$ 153,566	$ 5.50	
	Audio Visual - Rough In		27,921	sf	2.00	$ 55,842	$ 2.00	
28	**SAFETY/SECURITY**					**$ 153,566**	**$ 5.50**	**1.24%**
	Electrical - Access Controls/Security		27,921	sf	2.00	$ 55,842	$ 2.00	
	Electrical - Fire Alarm		27,921	sf	3.50	$ 97,724	$ 3.50	
31 - 33	**SITEWORK**					**$ 469,230**	**$ 16.81**	**3.80%**
	Excavation/Backfill (Utilities)		148	cy	110.00	$ 16,280	$ 0.58	
	Excavation/Backfill (Pit)		170	cy	110.00	$ 18,700	$ 0.67	
	Utilities - Storm, Sanitary		210	lf	125.00	$ 26,250	$ 0.94	
	Utilities - Fire/Water		212	lf	125.00	$ 26,500	$ 0.95	
	Vault		1	ea	45,000.00	$ 45,000	$ 1.61	
	Rebuild Tunnel Section Allowance		1	ea	120,000.00	$ 120,000	$ 4.30	
	Tunnel Improvement Allowance		1	ea	55,000.00	$ 55,000	$ 1.97	
	Utilities - Electrical Service		1	ls	50,000.00	$ 50,000	$ 1.79	
	Transformers - By UO		-	ea	40,000.00	$ -	$ -	
	ADA Ramp		1	ea	11,500.00	$ 11,500	$ 0.41	
	Patch Sidewalks and Asphalt		5,000	sf	11.00	$ 55,000	$ 1.97	
	Landscaping - Patching Only		1	ls	5,000.00	$ 5,000	$ 0.18	
	Site Lighting and Electrical		4	ea	7,500.00	$ 30,000	$ 1.07	
	Open Space Improvements Allowance (Incl in Villard)		-	ls	55,000.00	$ -	$ -	
	Misc Site Repairs Allowance		1	ls	10,000.00	$ 10,000	$ 0.36	
	CURRENT ESTIMATE SUBTOTAL (COST OF WORK)					**$ 8,809,143**	**$ 315.50**	**71.41%**
MARGINS & ADJUSTMENTS								
	GENERAL CONDITIONS	10.00%				$ 880,914	$ 31.55	7.14%
	TEMPORARY PROTECTION	1.00%				$ 88,091	$ 3.16	0.71%
	TEMPORARY MEP SYSTEMS	0.75%				$ 66,069	$ 2.37	0.54%
	ALL RISK INSURANCE	0.80%				$ 78,754	$ 2.82	0.64%
	SDI	1.00%				$ 88,091	$ 3.16	0.71%
	BOND	0.90%				$ 90,100	$ 3.23	0.73%
	CM/GC CONSTR.CONTINGENCY	3.50%				$ 308,320	$ 11.04	2.50%
	FEE	3.50%				$ 364,332	$ 13.05	2.95%
	ESCALATION/MARKET CONDITIONS (3.5% per yr)	14.00%				$ 1,508,334	$ 54.02	12.23%
	PRECONSTRUCTION (Fixed)		1	ls	53,500	$ 53,500	$ 1.92	0.43%

	MARGIN & ADJUSTMENT SUBTOTALS					**$ 3,526,505**	**$ 126.30**	**28.59%**
	CONSTRUCTION TOTALS					**$ 12,335,648**	**$ 441.81**	**100.00%**

NOTES/CLARIFICATIONS:

Campus tunnel improvements (piping replacements, added insulation, ect..) have typically been performed under the project scope but are reimbursed by deferred maintenance funds. These costs are usually $50,000 - $80,000. These costs are currently included in as an allowance in the project cost projection.

Typical Exclusions:

1. Supply site transformers.
2. Supply of conductors for primary service.
3. Gas, Electrical, Cable or other outside utilities.
4. Utility connection fees (i.e. Domestic Water, Sanitary Sewer, Storm Drain, Fire Water, and Electrical).
5. Water meter costs.
6. UO to pay for power, gas and water consumption costs.
7. Audio Visual equipment, programming or cabling.
8. Telecom equipment, programming or cabling.
9. Security equipment, programming or cabling.
10. Distributed Antenna System (DAS).
11. Furniture and/or soft goods.
12. Moving or relocation costs.
13. EWEB fees and permits.
14. All design fees (unless specifically listed as delegated design within the scope of work).

DEADY HALL - FURNITURE BUDGET

Project: Deady Hall Assessment
Date: 11/2/2017

Furniture Estimate			
Estimate includes material cost and labor to install			
Private Office (4 per office)	**Qty**	**Cost Each**	**Estimated Cost**
Ht. Adj. Desk (30x60) with Return	4	$1,800	$7,200
Box/Box/File	4	$350	$1,400
Bookcase	4	$350	$1,400
Task Chair	4	$550	$2,200
Guest Chair	4	$200	$800
Cost per space		**$13,000**	
Total Private Offices	**4**		**$52,000**
Active Learning Classroom - Tablet Arm Chairs	**Qty**	**Cost Each**	**Estimated Cost**
KI Learn 2 Tablet Arm Chair	33	$400	$13,200
Ht. Adj Table	1	$425	$425
Bariatric Chair	1	$400	$400
Blackboards, multiple walls	5	$750	$3,750
Teaching Station	1	$1,100	$1,100
Cost per space		**$18,875**	
Total Active Learning Classroom- Tablet Arm C	**7**		**$132,125**
Active Learning Classroom - Tables/Chairs	**Qty**	**Cost Each**	**Estimated Cost**
Chair with Casters	42	$400	$16,800
Tableswith Casters	21	$450	$9,450
Ht. Adj Table	1	$425	$425
Bariatric Chair	1	$400	$400
Blackboards, multiple walls	7	$750	$5,250
Teaching Station	1	$1,100	$1,100
Cost per space		**$33,425**	
Total Active Learning Classroom - Tables/Chair	**2**		**$66,850**
GTE Work Area (for 10 GTE)	**Qty**	**Cost Each**	**Estimated Cost**
Tables (per linear foot)	10	$100	$1,000
Benching Desk System (per linear foot)	28	$225	$6,300
Mobile Pedestal File	10	$325	$3,250
GTE Task Chair	1	$350	$350
Cost per space		**$10,900**	
Total GTE Work Areas	**3**		**$32,700**
Medium Conference Room	**Qty**	**Cost Each**	**Estimated Cost**
Conference Table (36x72)	1	$850	$850
Multi-Purpose Chair	10	$300	$3,000
Cost per space		**$3,850**	
Total Small Conference Rooms	**2**		**$7,700**
Large Conference Room	**Qty**	**Cost Each**	**Estimated Cost**
Conference Table (96x48 with power)	1	$2,200	$2,200
Conference Chairs	12	$400	$4,800
Credenza	1	$1,100	$1,100
Cost per space		**$8,100**	
Total Large Conference Rooms	**3**		**$24,300**

Break Room	Qty	Cost Each	Estimated Cost
Round Table (36" Dia)	2	$450	$900
Guest Chairs	8	$250	$2,000
Cost per space		$2,900	
Total Break Rooms	1		$2,900

Hearth Area	Qty	Cost Each	Estimated Cost
Sofa	0	$1,400	$0
Lounge Chair	3	$1,200	$3,600
Occasional Table	1	$600	$600
Cost per space		$4,200	
Hearth Areas	7		$29,400

Lactation Room	Qty	Cost Each	Estimated Cost
Occasional Table	1	$400	$400
Chair	1	$850	$850
Cost per space		$1,250	
Total Lactation Rooms	1		$1,250

Miscellaneous Items			
Large Whiteboards	5	$1,100	$5,500
Chalkboards (in corridors)	15	$750	$11,250
		Sub-total	$365,975
		Contingency (25%)	$91,494
		Install & Delivery (15%)	$54,896
		Escalation (4% per year for 4 yrs)	$81,978
		Estimated Budget Total	$594,343

Budget Prepared By: Maggie Kendall

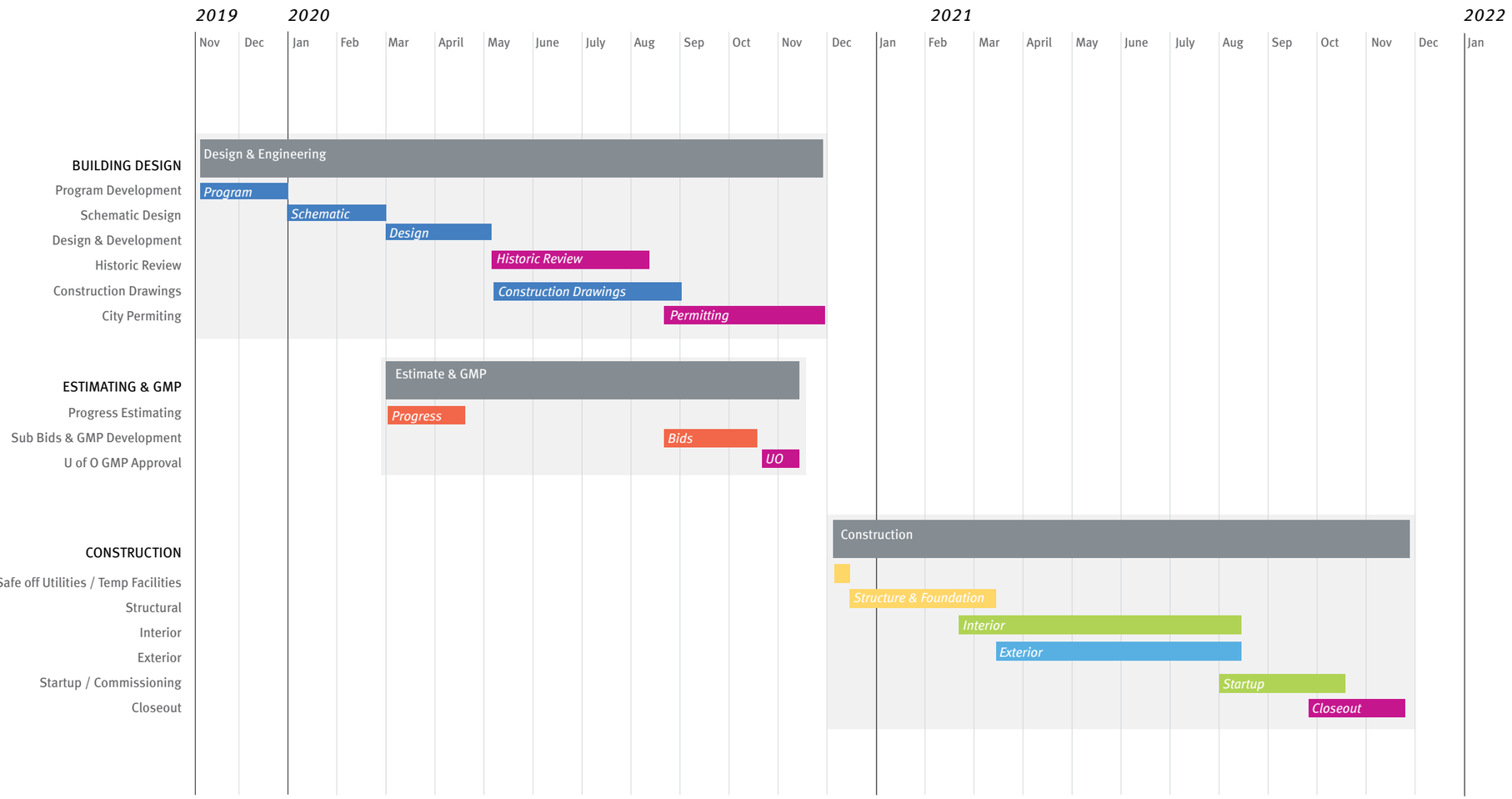
SIGNAGE/Wayfinding BUDGET

Project: Deady Hall Assessment
Date: 11/2/2017

Signage Estimate				
Estimate includes material cost and labor to install				
Level/Area/Suite:				
Item	**Qty**	**Cost Each**	**Est. Cost**	**Notes**
Room # w/ Braille	5	$25	$125	
ID Room Sign w/ Thumb Slider	26	$75	$1,950	
ID Room Sign w/ Thumb Slider & backplate	10	$95	$950	
Restroom/Stair/Elev Sign	61	$65	$3,965	Includes area of rescue signs, 'in case of fire signs' & fire escape route signs
Flag Sign	20	$115	$2,300	
General Directory	10	$300	$3,000	
Building Directory	4	$450	$1,800	
Graphics, etc	10	$250	$2,500	Entry wayfinding, if needed
		Sub-total	**$16,590**	
		Install	**$4,148**	
		Escalation (4% for 4 years)	**$3,318**	**This worksheet to be used for budgetary purposes only. Installed product cost is an estimate based on previously quoted/completed projects from ImageKing*
		Estimated Budget Total	**$20,738**	

Budget Prepared By: Maggie Kendall

Revisions:



PHASES

- Proposals / Estimates
- Design
- Core & Shell
- Structure & Foundation
- Tenant Improvement

- Review

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LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: University of Oregon Deady Hall
Date: 10/19/2017

Y	?	N			
1			Credit	Integrative Process	1

11	1	20	Location and Transportation		16
		16	Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
		2	Credit	High Priority Site	2
5			Credit	Surrounding Density and Diverse Uses	5
5			Credit	Access to Quality Transit	5
	1		Credit	Bicycle Facilities	1
		1	Credit	Reduced Parking Footprint	1
		1	Credit	Green Vehicles	1

1	3	5	Sustainable Sites		10
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		1	Credit	Site Development - Protect or Restore Habitat	2
		1	Credit	Open Space	1
		3	Credit	Rainwater Management	3
	2		Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1

5	3	3	Water Efficiency		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
3	2	1	Credit	Indoor Water Use Reduction	6
		2	Credit	Cooling Tower Water Use	2
	1		Credit	Water Metering	1

17	9	7	Energy and Atmosphere		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
	4	2	Credit	Enhanced Commissioning	6
16	2		Credit	Optimize Energy Performance	18
	1		Credit	Advanced Energy Metering	1
		2	Credit	Demand Response	2
		3	Credit	Renewable Energy Production	3
1			Credit	Enhanced Refrigerant Management	1
	2		Credit	Green Power and Carbon Offsets	2

3	10	0	Materials and Resources		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
	5		Credit	Building Life-Cycle Impact Reduction	5
2			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
	2		Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
	2		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
1	1		Credit	Construction and Demolition Waste Management	2

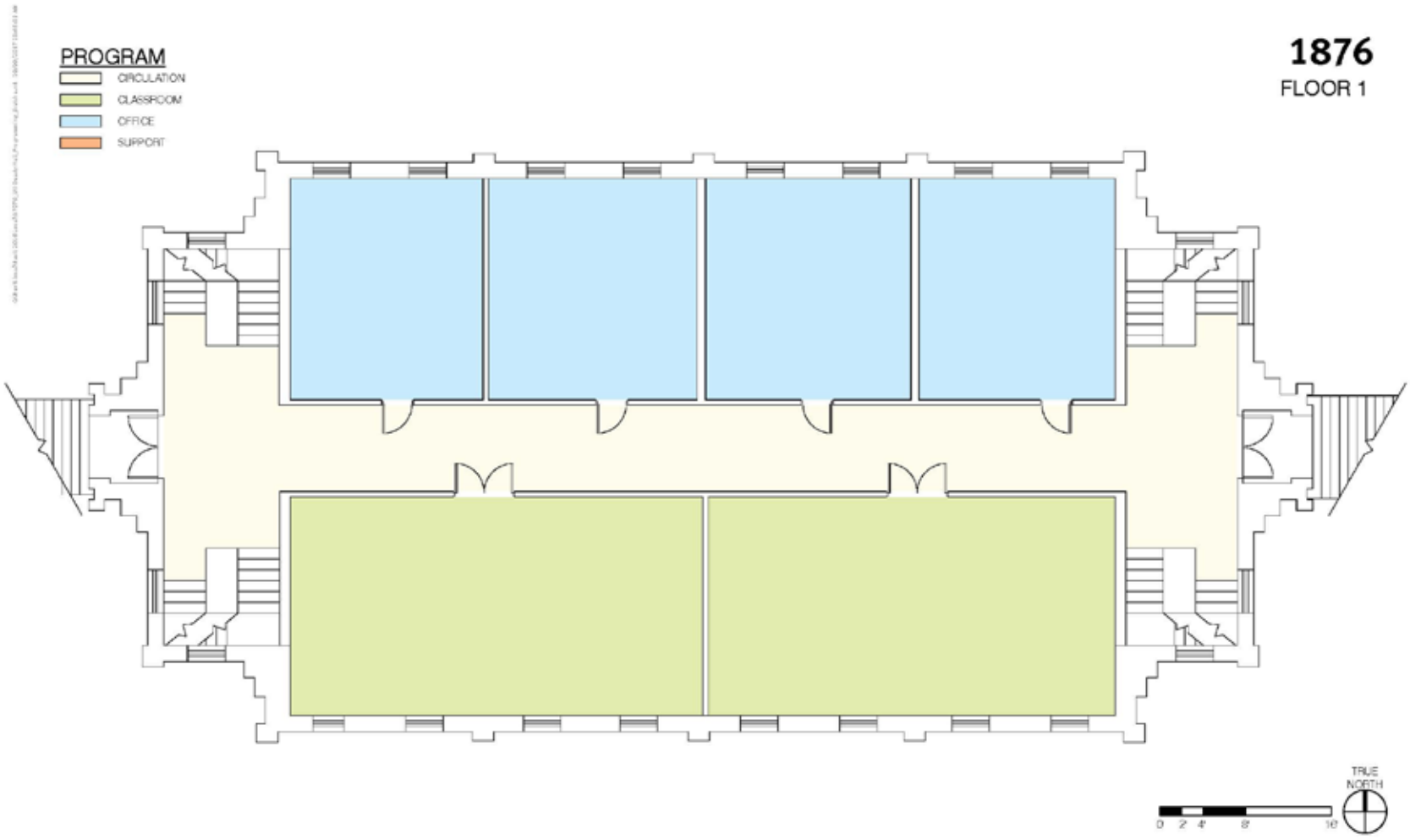
10	3	0	Indoor Environmental Quality		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
1	1		Credit	Enhanced Indoor Air Quality Strategies	2
1			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1	1		Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1			Credit	Interior Lighting	2
2	1		Credit	Daylight	3
1			Credit	Quality Views	1
1			Credit	Acoustic Performance	1

6	0	0	Innovation		6
5			Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

1	2	1	Regional Priority		4
		1	Credit	Regional Priority: S Rainwater Management	1
	1		Credit	Regional Priority: S Indoor Water Use Reduction, 40%	1
1			Credit	Regional Priority: S Building Product Disclosure: Environmental Product Declaration	1
	1		Credit	Regional Priority: S Building Product Disclosure: Sourcing of Raw Materials	1

55	31	36	TOTALS	Possible Points:	110

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110



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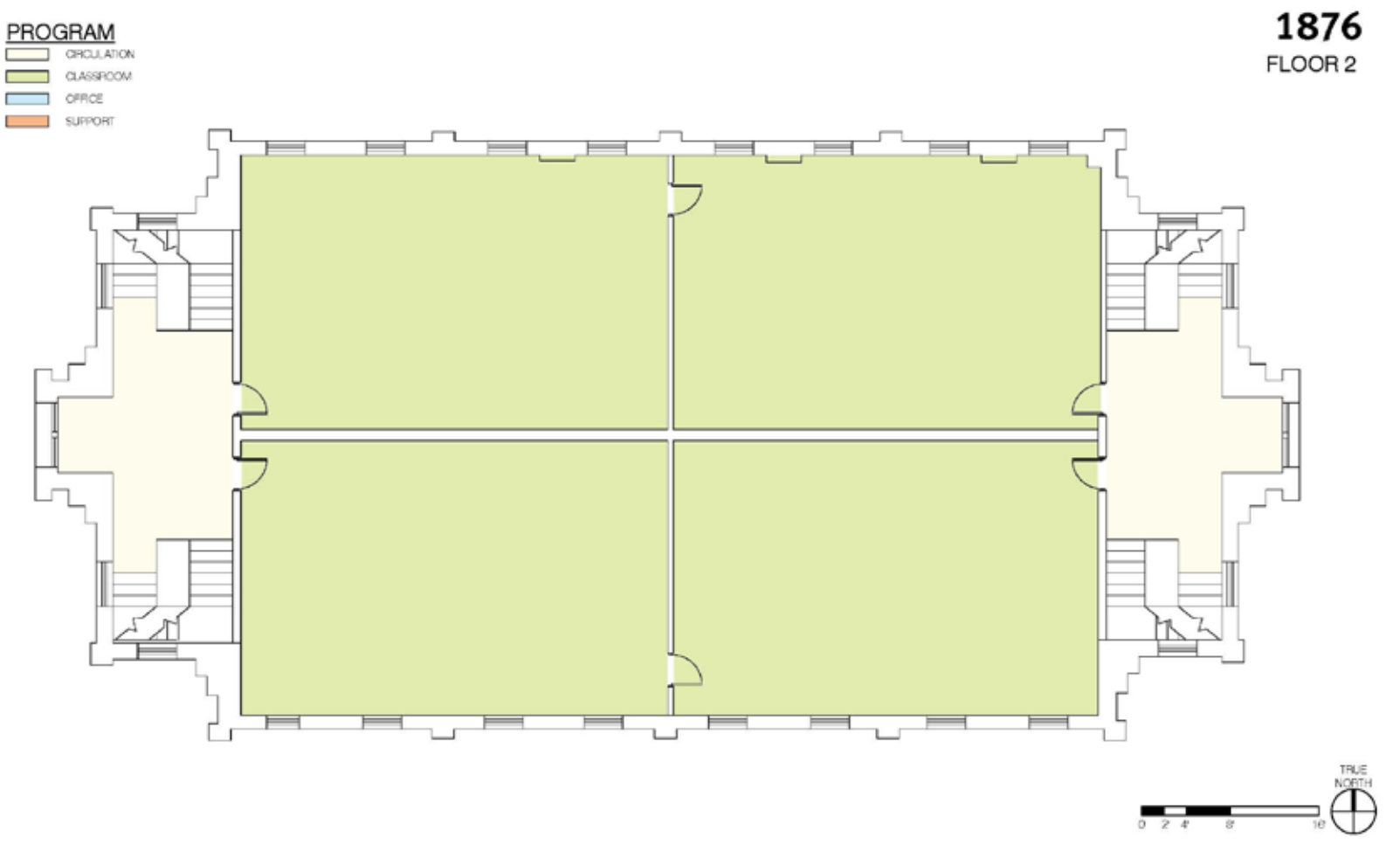
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CIRCULATION
CLASSROOM
OFFICE
SUPPORT
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FLOOR 2
TRUE NORTH
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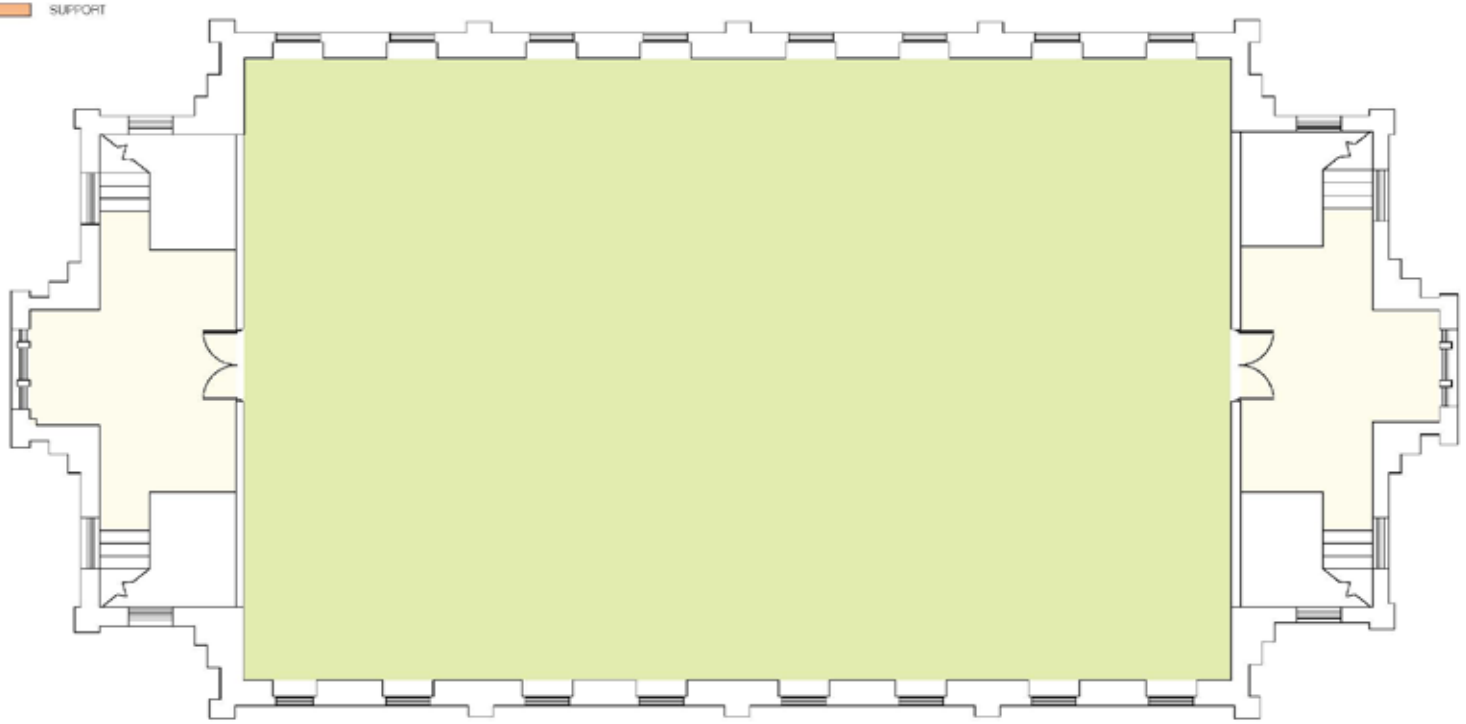
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FLOOR 3
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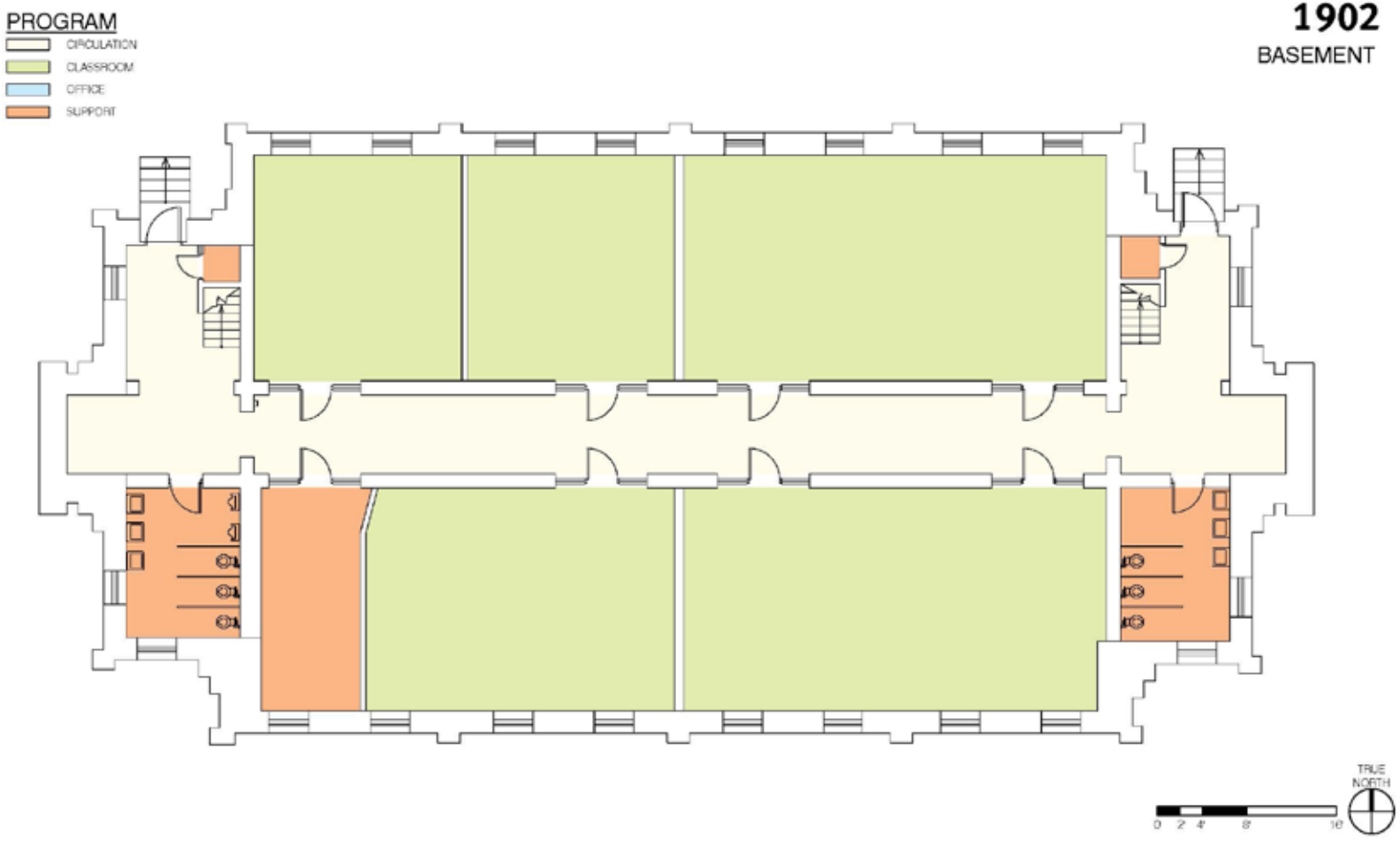
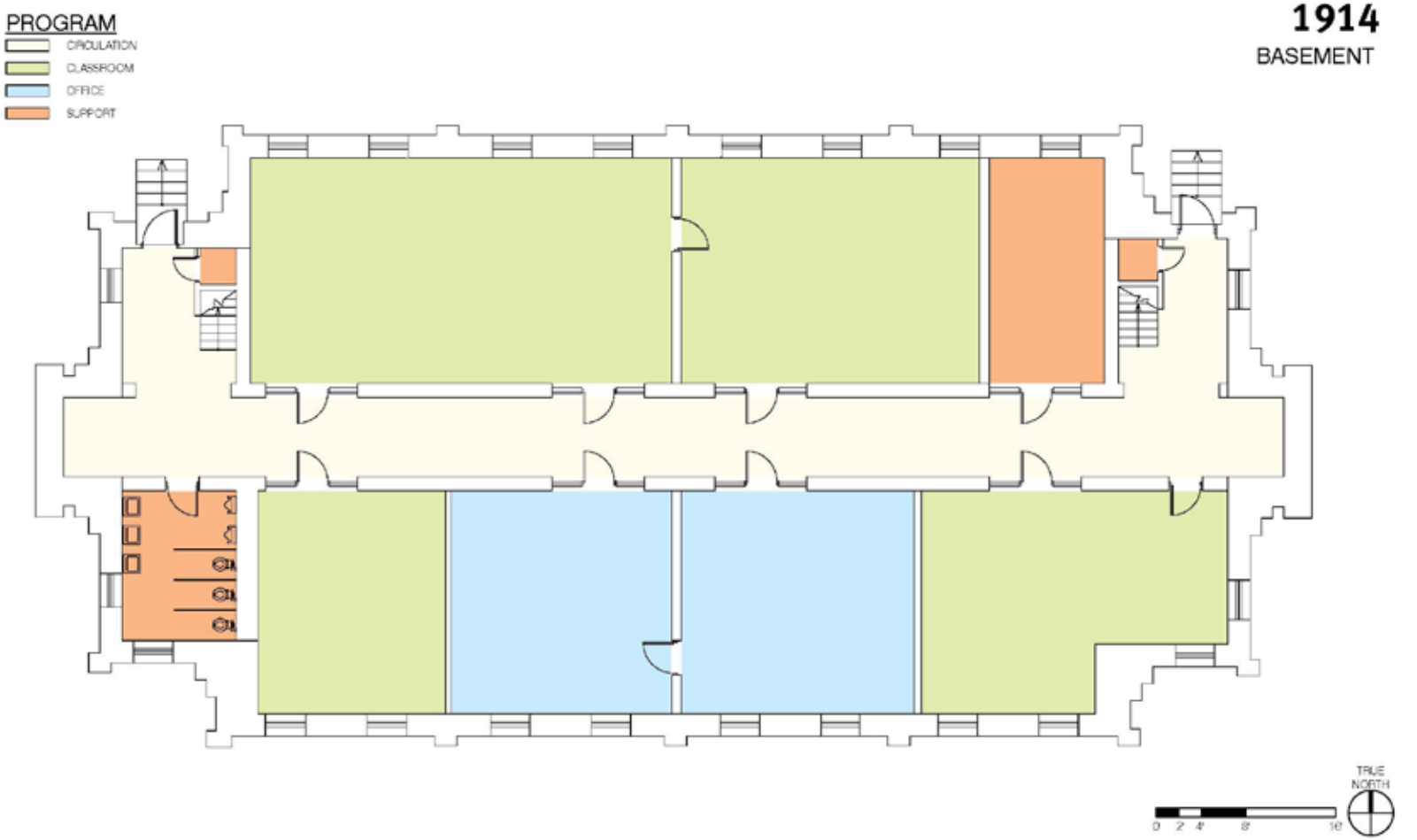
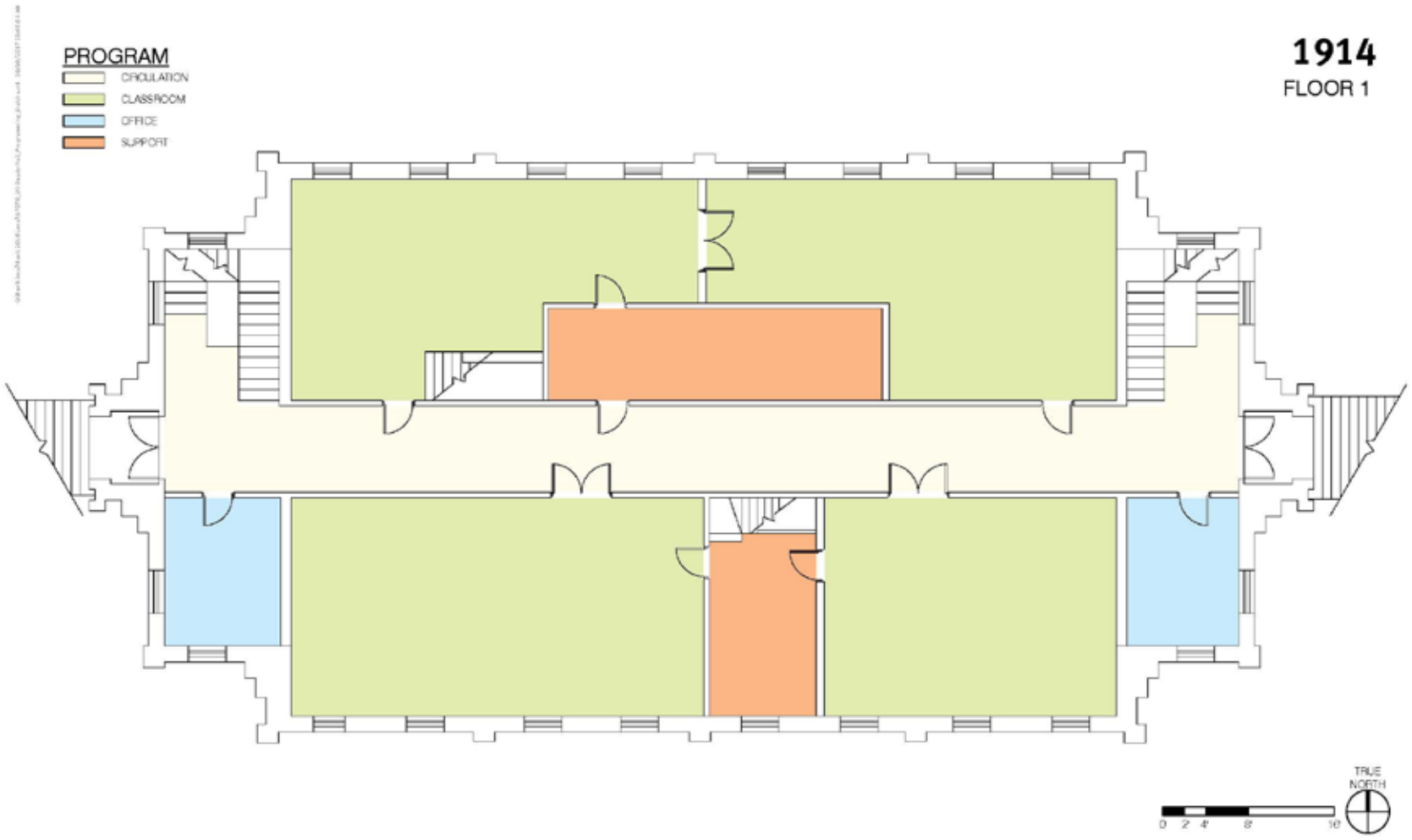
1902
BASEMENT



1914
BASEMENT





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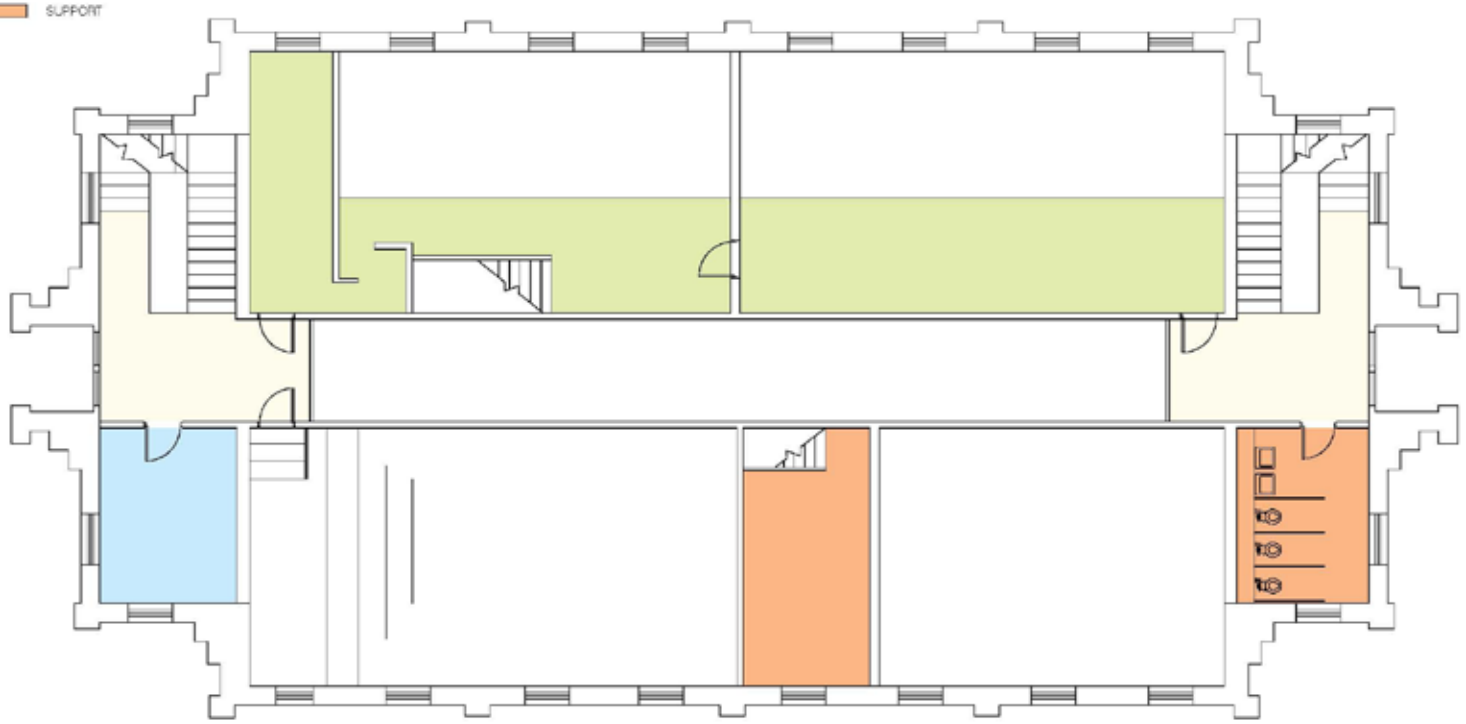
1914

FLOOR 1 MEZZANINE

PROGRAM

- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT



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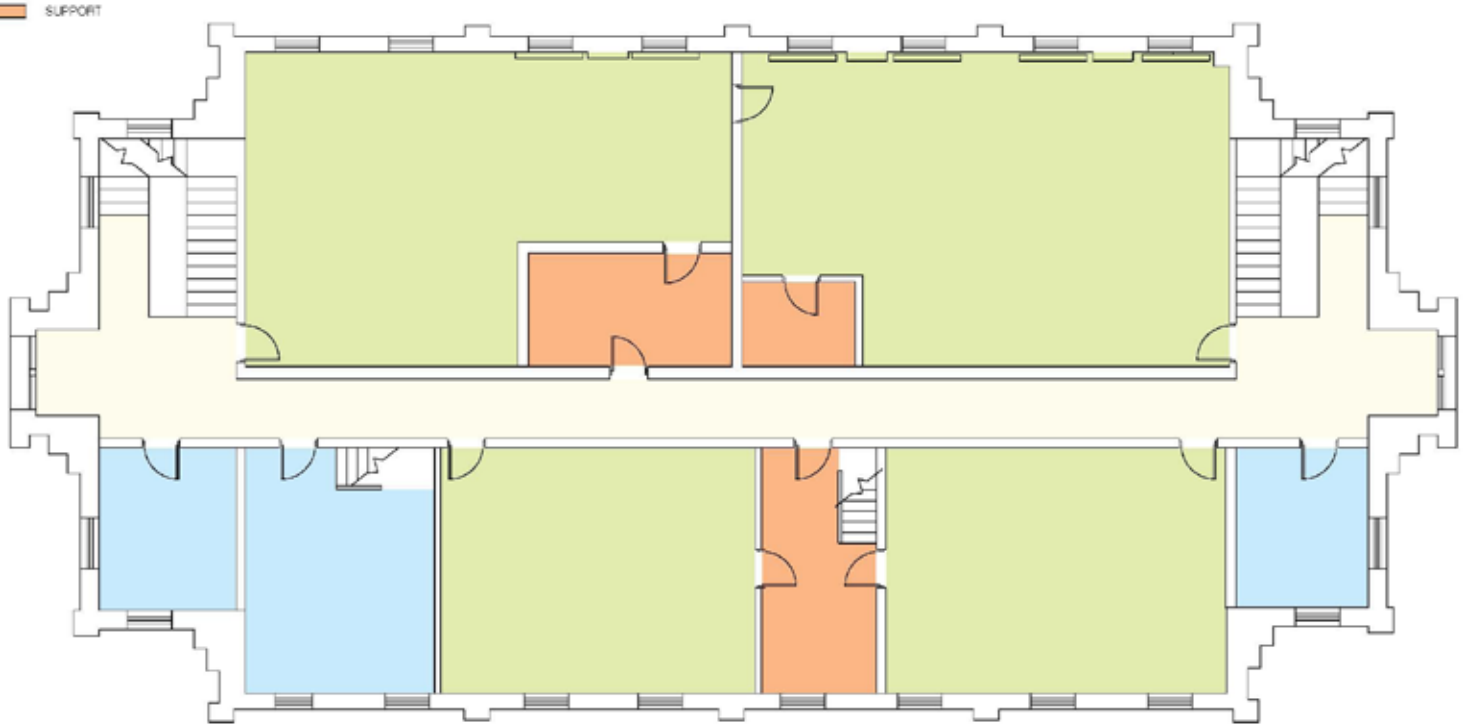
FLOOR 2

PROGRAM
- CIRCULATION
- CLASSROOM
- OFFICE
- SUPPORT



TRUE NORTH

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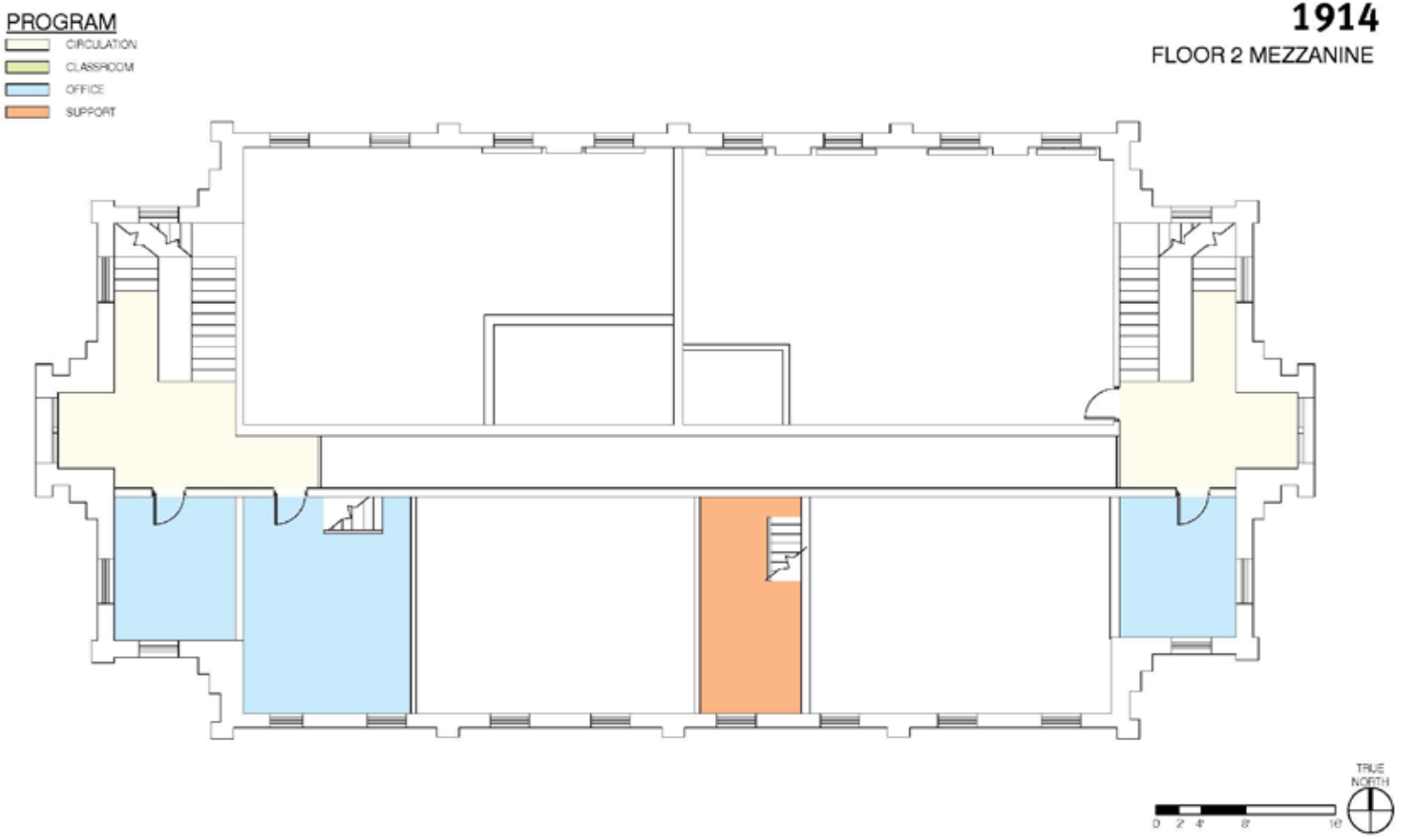
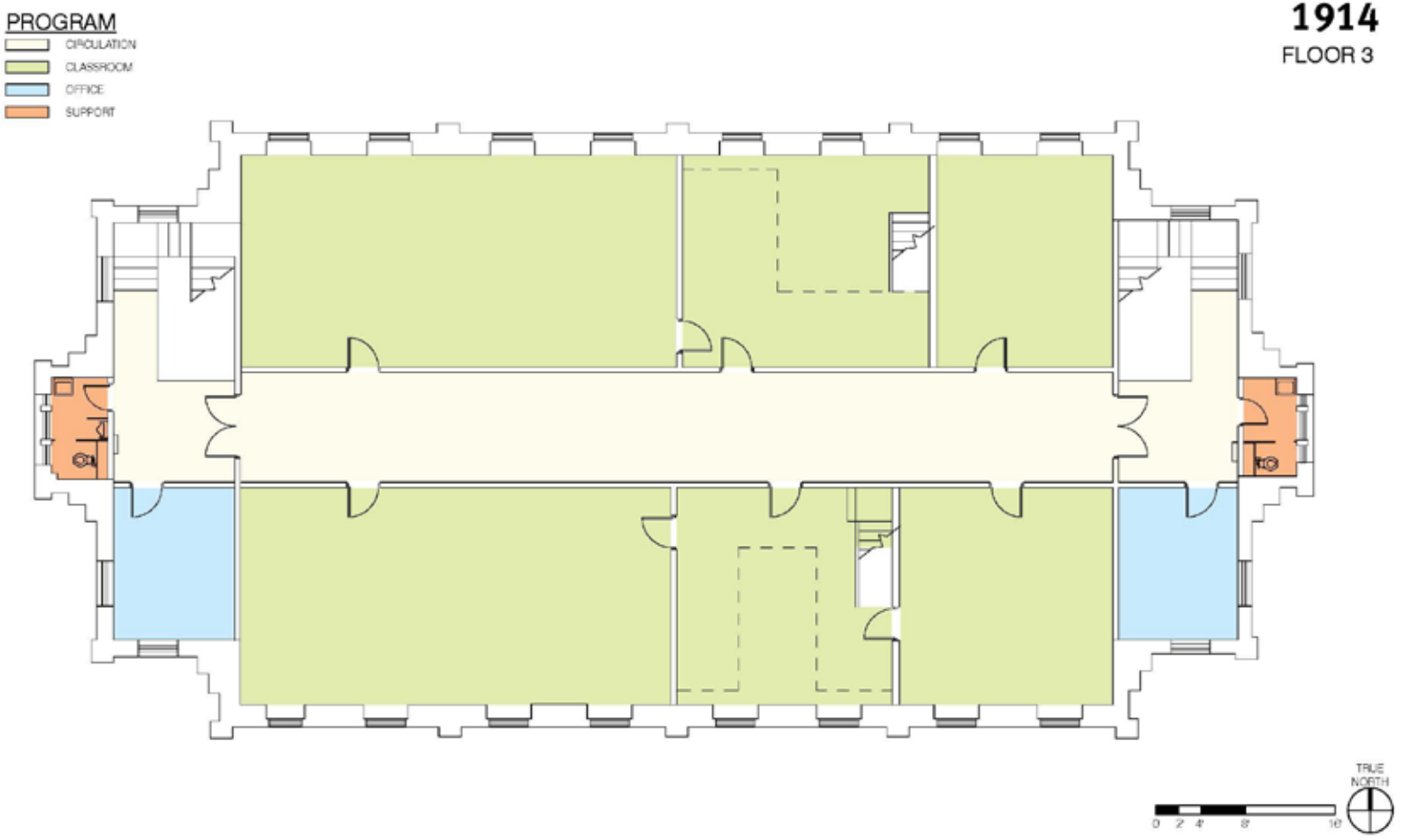
1914

FLOOR 2 MEZZANINE




PROGRAM
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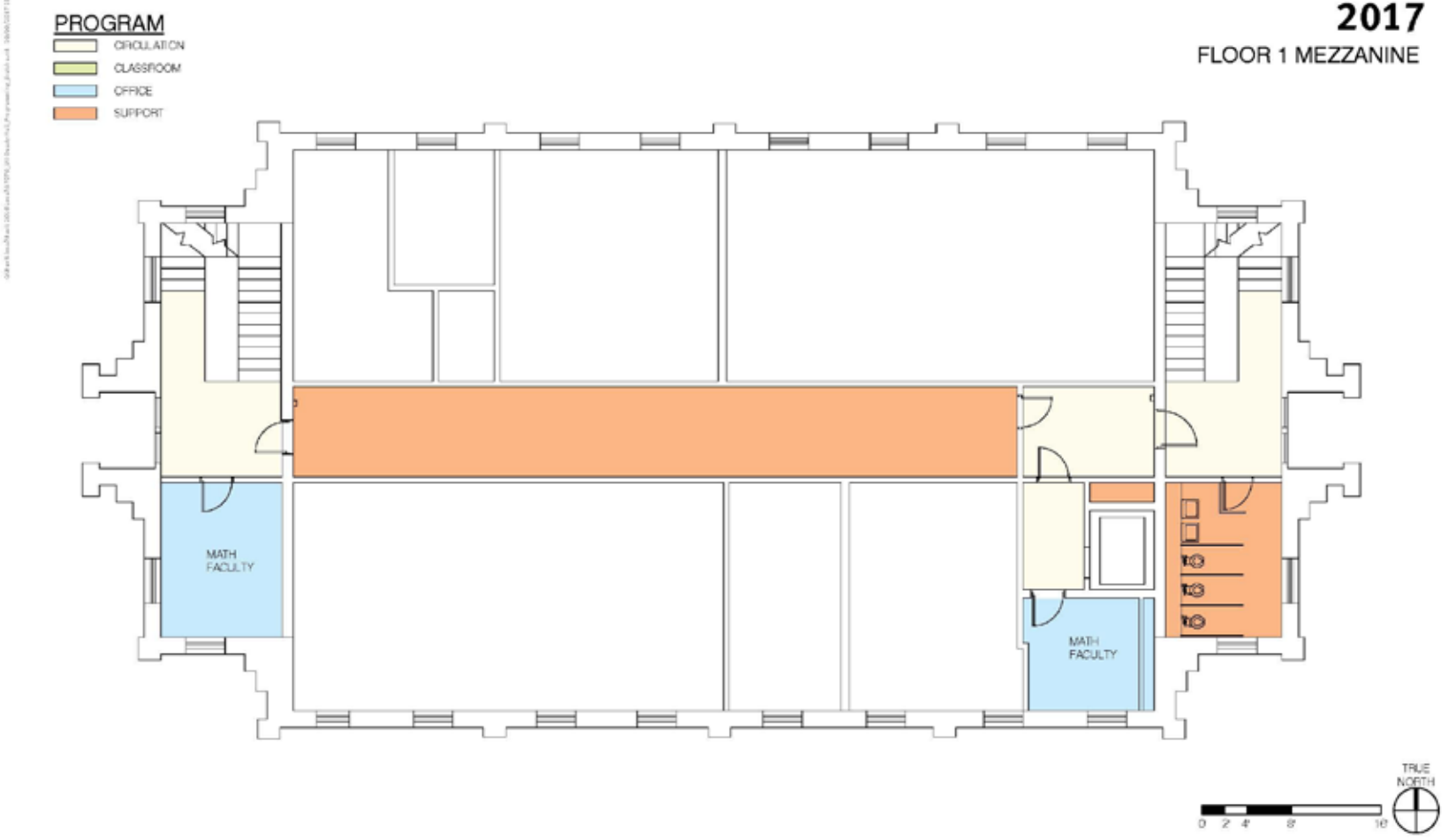

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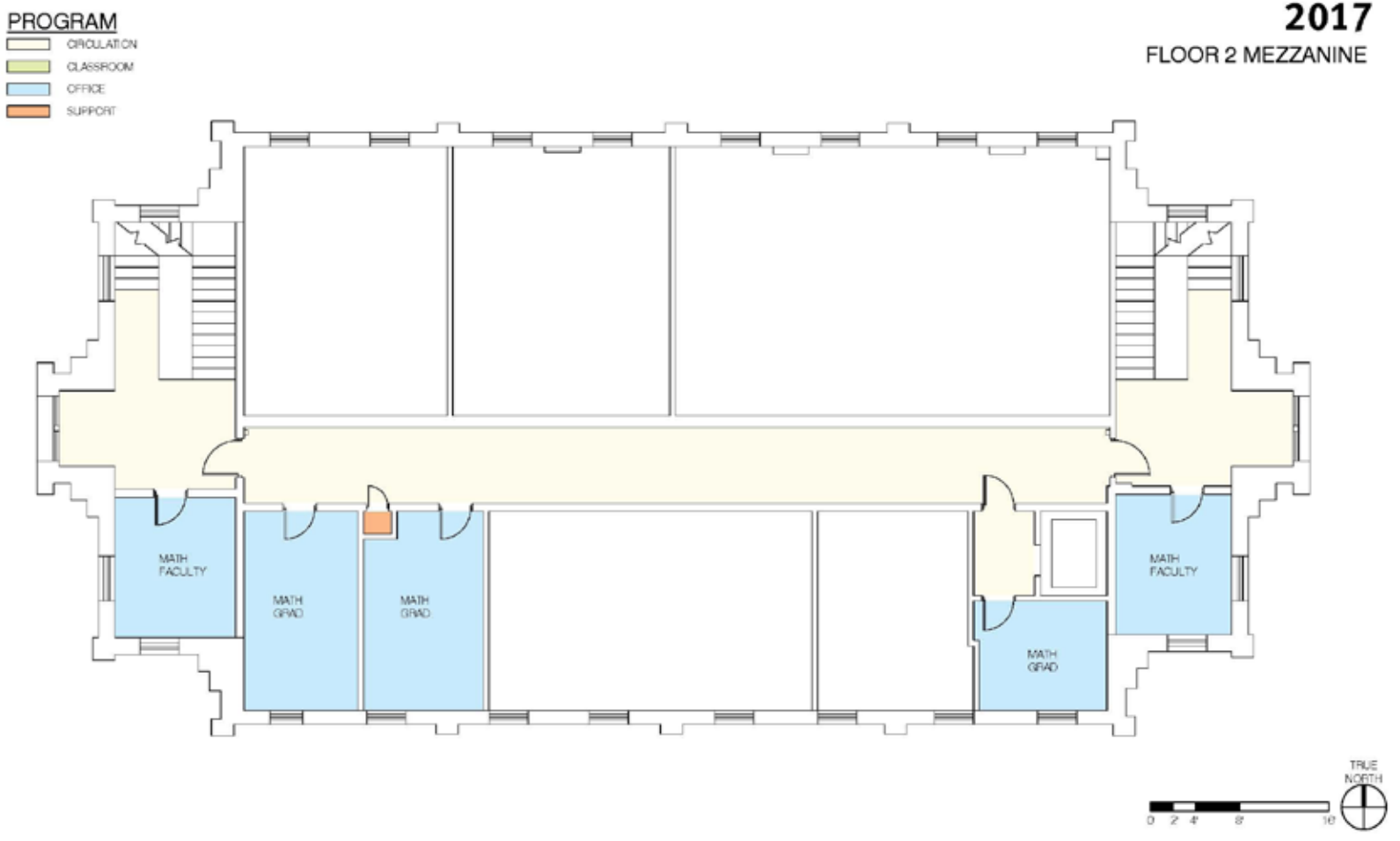

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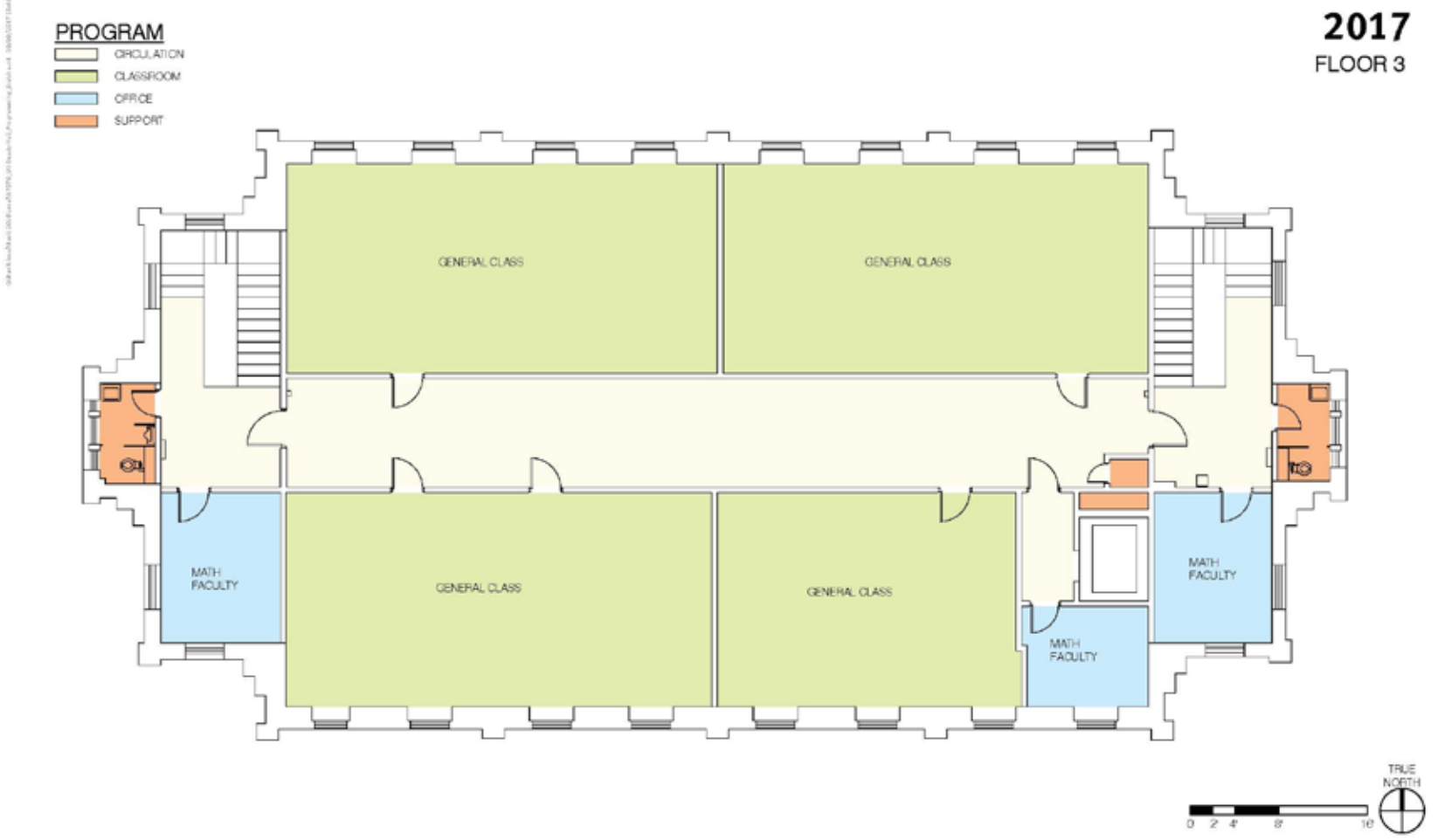

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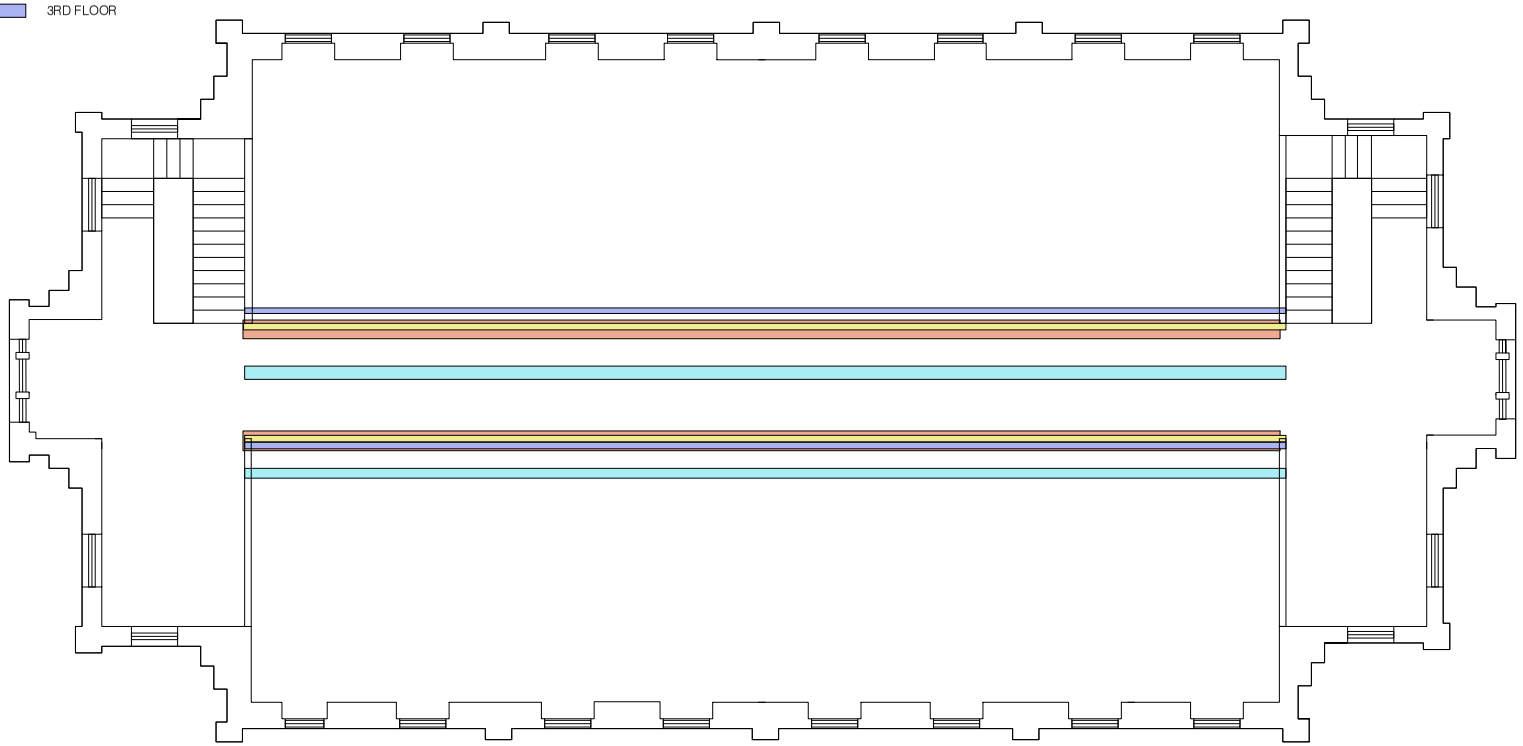
EXISTING COORIDORS

ALL FLOORS

CORRIDORS

- BASEMENT
- 1ST FLOOR + MEZZANINE
- 2ND FLOOR + MEZZANINE
- 3RD FLOOR



TRUE NORTH

0' 2' 4' 8' 16'